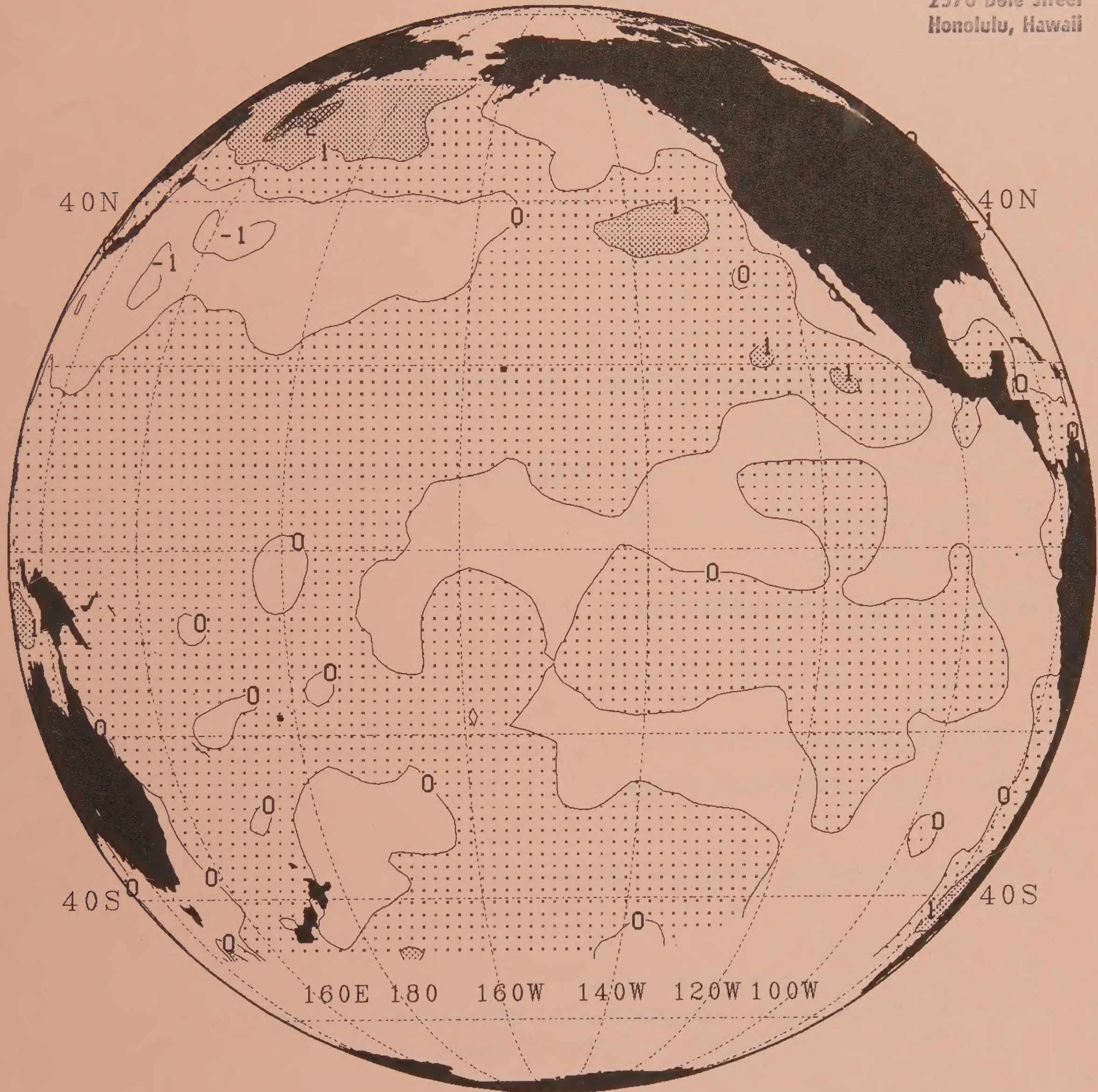
気象庁海洋月報

Monthly Ocean Report

October 1996 (No. 46)



Climate and Marine Department
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気象庁 気候・海洋気象部

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表紙は、1996年10月の太平洋の月平均海面水温偏差図です。
陰影部は、平年より高温の海域を示しています。

The figure on the front cover shows the monthly mean SST anomalies for October 1996 in the Pacific Ocean.
Areas of positive anomalies are shaded.

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海況の特徴（1996年10月）

太平洋の海況

太平洋赤道域の海面水温は、日付変更線以東では依然として弱い負偏差であり、エルニーニョ監視海域（4°S～4°N、150°W～90°W）の海面水温偏差は、-0.3℃だった。一方、西部熱帯域では、平年より高い状態が1年以上にわたって継続しており、170°E以西は平年より0.5℃以上高く、D海域の海面水温偏差は、+0.6℃であった（第1表、第1図、第6図）。

太平洋の赤道に沿った表層水温断面図によれば、前月に引き続き、水温躍層付近で西部では正偏差、東部では負偏差が見られた（第9図）。啓風丸が137°Eに沿って観測した結果によると、昨年の10月と同様に5°N以南の熱帯域の表層の暖水層は厚く、100m深付近まで28℃以上であった（第A図）。

日本付近から160°Wにかけての30～40°Nでは、－0.5℃以下の負偏差が広がっていた。一方、北米大陸西岸からハワイにかけては平年より0.5℃以上高く、また、165°W以西の45°N以北では1℃以上高かった（第6図）。

日本近海の海況

前月、関東東方を中心に広がっていた海面水温の負偏差域は、南西諸島付近まで広がり、特に南西諸島の東方では-1℃以下の負偏差が見られた。日本海及び東シナ海ではほぼ全域で正偏差であった（第24図）。

黒潮は、九州から紀伊半島にかけて接岸して流れた後、東に向かい、八丈島の北を経て、ほぼ34°Nに沿って東に流れていた（第27図）。

本州東方の親潮系の冷水は、沿岸寄りの分枝は41.3°N,143.6°Eまで、沖合の分枝は39.1°N,145.7°Eまで、それぞれ達していた（第26図）。

熱帯の気象

対流活動は東部インド洋から海洋大陸、ニューギニア南東海上にかけての領域とカリブ海で平年より活発である一方、150°E以東の中部赤道太平洋では不活発であった。太平洋東部のITCZは平年よりやや北に偏っていた。200hPaでの大規模な発散域の中心は海洋大陸の北側に存在し、平年より30度西に偏っていた。850hPaでの赤道域上空の風は140°E～130°Wの太平洋上で顕著な東風偏差が卓越する一方、インド洋では西風偏差が見られた。9月には不明瞭になっていた季節内変動の対流活動を活発化させる位相が10月初めにアフリカ大陸に現れ、中旬にインド洋、下旬に海洋大陸を通過した（第1表、第3～5図、第12図）。

HIGHLIGHTS October 1996

Pacific

In the equatorial Pacific, sea surface temperature (SST) anomalies remained slightly negative east of the dateline. The SST index for region B (Fig. 1) was -0.3°C, while SSTs more than 0.5°C above normal were observed west of 170°E in the western tropical Pacific. The SST index for region D (Fig. 1) was +0.6°C. Positive anomalies have continued for over a year in the western tropical Pacific (Table 1, Figs. 1 and 6).

Positive subsurface temperature anomalies continued along the thermocline in the western equatorial Pacific, while negative anomalies in the eastern equatorial Pacific (Fig. 9). According to oceanographic observations along 137°E by R/V Keifu Maru of JMA, waters warmer than 28 °C were found from sea surface to a depth of 100m south of 5°N as observed in October 1995.

Negative SST anomalies lower than -0.5°C were observed between 30°N and 40°N from near Japan eastward to 160°W. SSTs were more than 0.5°C above normal from the west coast of North America to the Hawaii islands, and positive SST anomalies more than 1.0°C prevailed north of 45°N west of 165°W (Fig. 6).

Seas adjacent to Japan

Negative SST anomalies which had prevailed mainly east of Kanto in September expanded to the Nansei Islands during October. SST anomalies were lower than -1°C east of the Nansei Islands. Positive SST anomalies prevailed in the Japan Sea and the East China Sea (Fig. 24).

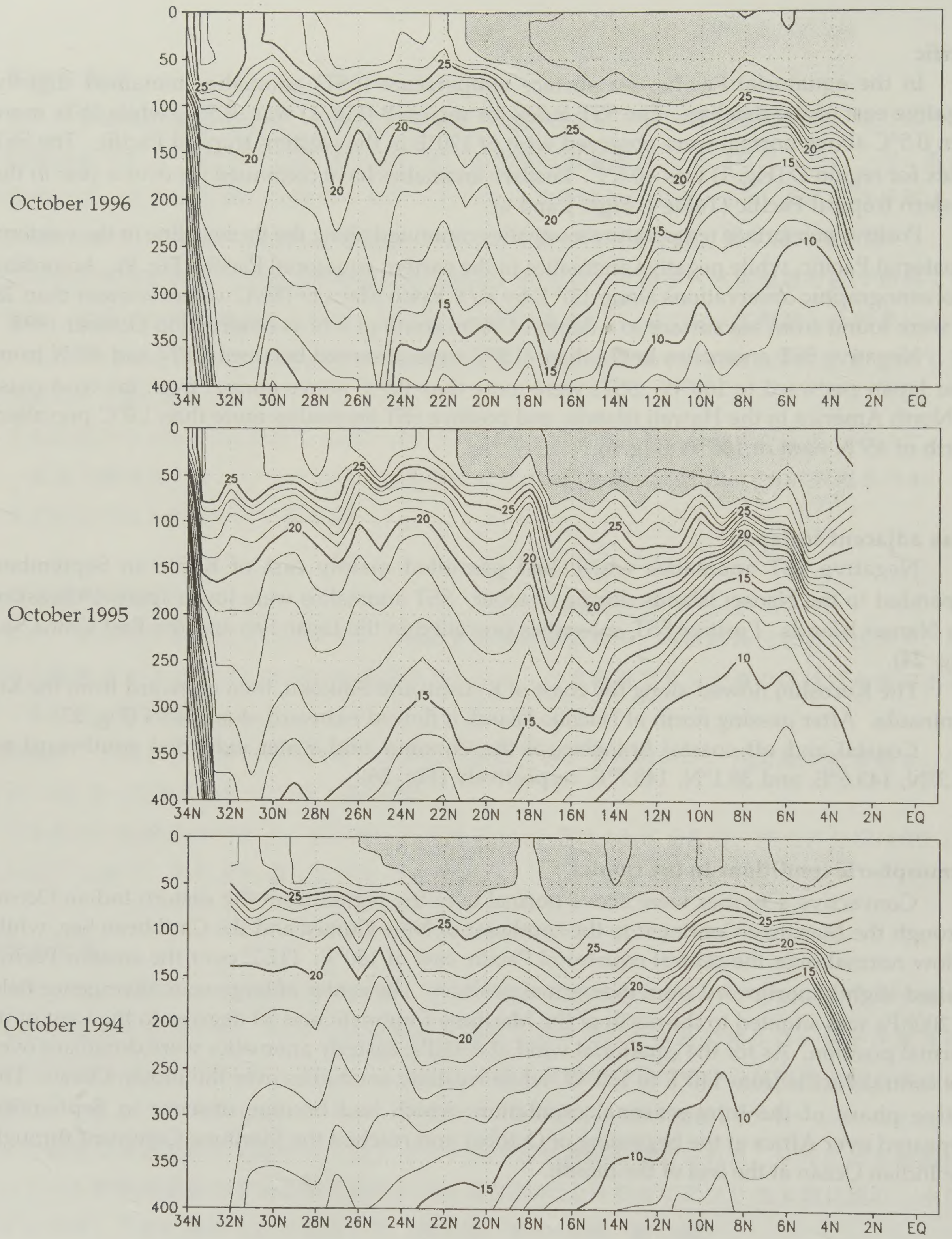
The Kuroshio flowed along the coast of Kyushu and Shikoku, then eastward from the Kii Peninsula. After passing north of Hachijo Island, it flowed eastward along 34°N (Fig. 27).

Coastal and off coastal branches of the Oyashio cold water extended southward to 41.3°N, 143.6°E, and 39.1°N, 145.7°E, respectively (Fig. 26).

Atmospheric conditions in the tropics

Convective activities were above normal over the region from the eastern Indian Ocean through the Maritime Continent to the southeast of New Guinea and the Caribbean Sea, while below normal over the central equatorial Pacific east of 150°E. ITCZ over the eastern Pacific shifted slightly northward from the normal position. The center of large-scale divergence field at 200hPa was situated to the north of the Maritime Continent and 30 degrees to the west of its normal position. As for the equatorial wind at 850hPa, easterly anomalies were dominant over the central Pacific from 140°E to 130°W, while westerly anomalies over the Indian Ocean. The active phase of the intra-seasonal oscillation, which had become obscure in September, appeared over Africa at the beginning of October and reached the Maritime Continent through the Indian Ocean at the end of the month.

Depth-Latitude Sections of Subsurface Temperature along 137°E



図－A　　啓風丸による137゜Eに沿う表層水温断面図
（上：1996年10月、中：1995年10月、下：1994年10月）

Fig. A　　Depth-latitude sections of subsurface temperature along 137°E for October 1996 (top), October 1995 (middle) and October 1994 (bottom) observed by R/V Keifu Maru of JMA. Contour interval is 1°C. Values greater than 28°C are shaded.

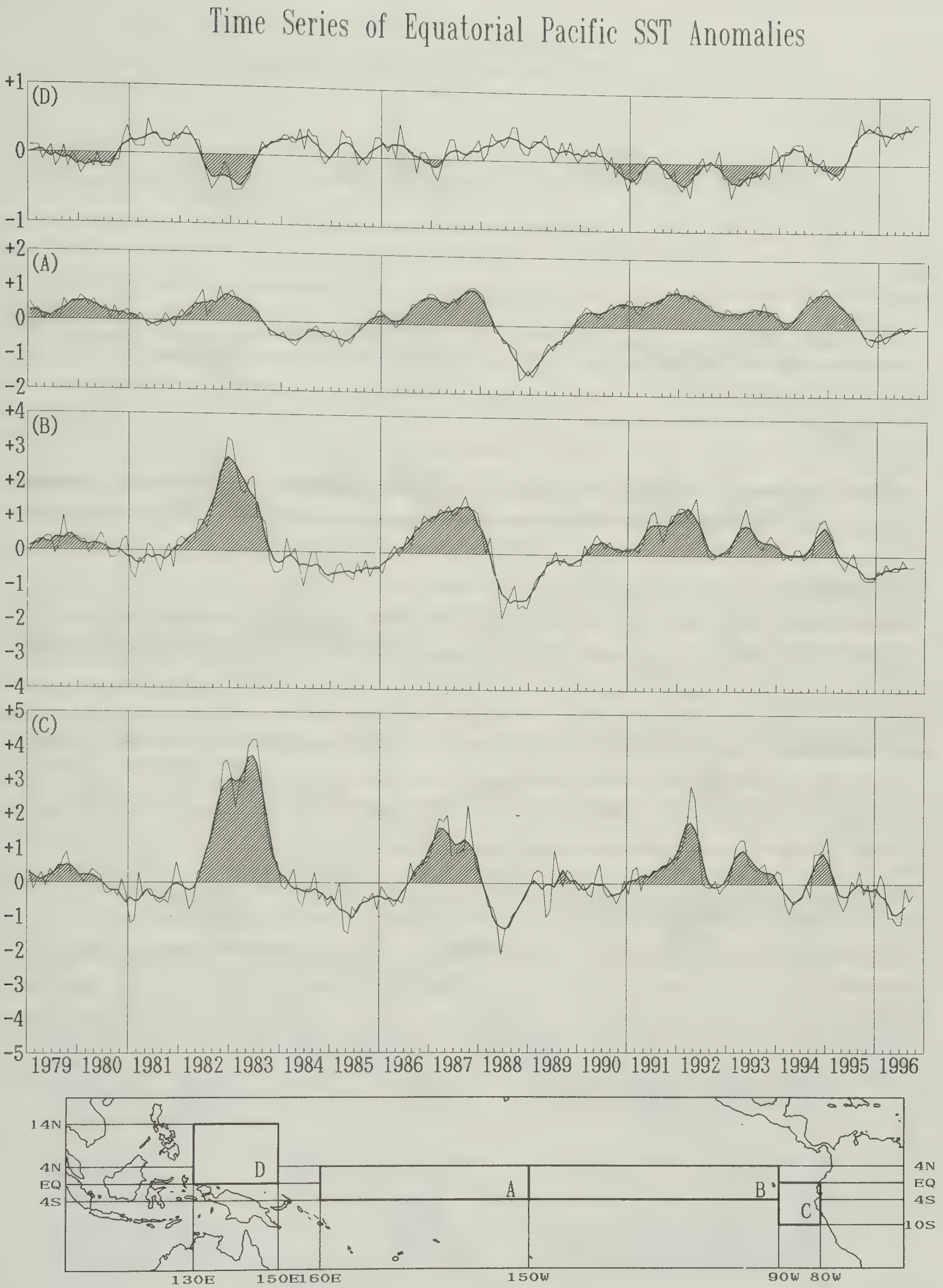
DATE	SEA SURFACE TEMPERATURE AND ANOMALY (°C)								SEA LEVEL ANOMALY (cm)					
	Region D 14N-Eq. 130E-150E		Region A 4N-4S 160E-150W		Region B 4N-4S 150W-90W		Region C Eq.-10S 90W-80W		Yap 10N,138E	Rabaul 4S,152E	Majuro 7N,171E	Tarawa 1N,173E	Christ-mas 2N,157W	Santa Cruz 1S, 90W
NOV 95	29.7	+0.5	27.9	-0.5	23.9	-0.7	21.5	0.0	14.6	13.1	10.9	-1.4	-8.2	-2.1
DEC 95	29.5	+0.6	28.0	-0.2	24.2	-0.7	21.9	-0.7	12.1	16.2	3.4	1.0	-6.2	-4.8
JAN 96	29.0	+0.5	27.9	-0.1	25.0	-0.4	24.1	-0.2	9.2	13.7	7.9	5.5	-2.7	-3.0
FEB 96	28.6	+0.3	27.6	-0.4	25.7	-0.5	26.0	+0.3	9.7	14.0	5.9	4.2	-3.1	6.1
MAR 96	28.8	+0.4	27.8	-0.3	26.7	-0.2	25.9	0.0	8.2	11.8	-3.7	6.1	0.3	1.0
APR 96	29.3	+0.5	28.1	-0.1	26.7	-0.4	24.1	-1.0	-4.4	12.9	5.0	2.6	-2.8	-4.4
MAY 96	29.6	+0.5	28.5	0.0	26.2	-0.4	22.9	-1.0	-8.8	14.2	7.8	7.9	-0.7	-3.7
JUN 96	29.7	+0.4	28.6	0.1	25.7	-0.4	21.5	-1.2	2.5	10.1	4.4	5.1	-0.6	-5.1
JUL 96	29.8	+0.6	28.4	-0.1	25.1	-0.1	20.4	-1.2	12.3	12.9	3.8	1.2	-3.7	-0.2
AUG 96	29.6	+0.5	28.4	0.0	24.3	-0.3	20.5	-0.1	10.5	16.0	8.4	1.5	-1.4	-2.1
SEP 96	29.8	+0.6	28.4	+0.1	24.3	-0.3	19.8	-0.5	13.3		14.5	2.4	-7.9	-2.9
OCT 96	29.9	+0.6	28.5	+0.1	24.3	-0.3	20.4	-0.3						

第1表（a）　エルニーニョ監視指数

Table 1 (a)　El Niño monitoring indices. Data sources are the SOC for ISLP-Pac, Department of Oceanography, University of Hawaii for the sea level anomaly. All the data of sea level anomaly has been revised.

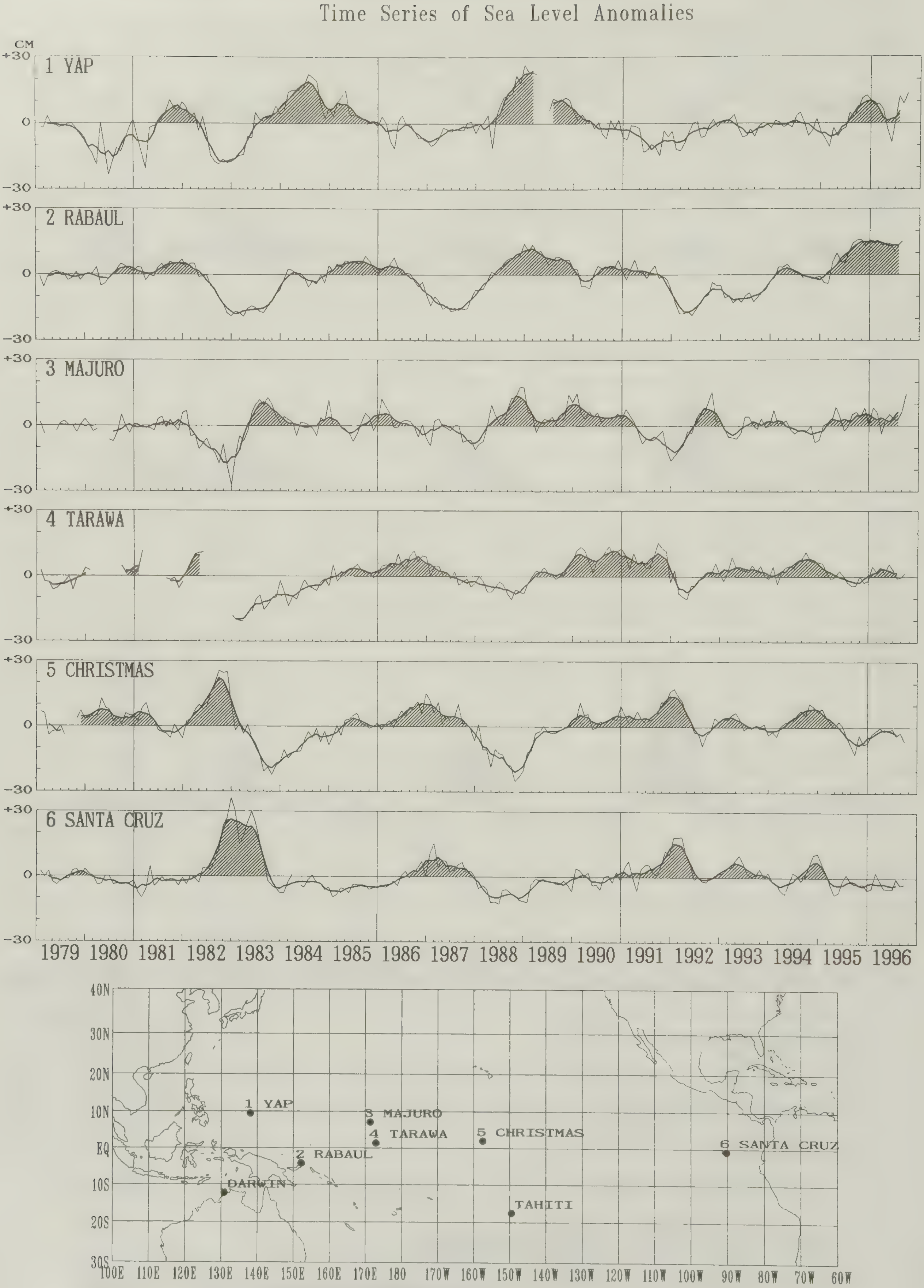
DATE	SOI	SEA LEVEL PRESSURE ANOMALIES		HIGH CLOUD AMOUNT INDEX			EQUATORIAL ZONAL WIND INDEX				
		TAHITI 17°33'S, 149°37'W	DARWIN 12°24'S, 130°52'E	HCLD-PH 20N-10N 110E-140E	HCLD-MC 5N-5S 110E-135E	HCLD-DL 5N-5S 170E-170W	U200-IN 5N-5S 80E-100E	U200-CP 5N-5S 180 -125W	U850-WP 5N-5S 160E-175W	U850-CP 5N-5S 170W-135W	U850-EP 5N-5S 130W-100W
NOV 95	0.1	0.1	-0.1	0.1	1.4	-1.2	-2.1	0.8	-1.1	-0.8	-0.8
DEC 95	-0.5	-0.9	0.0	4.0	1.2	-1.2	-0.3	-0.1	-1.0	-0.3	0.3
JAN 96	0.8	1.0	-0.7	1.6	1.5	-1.3	-1.0	0.8	-1.2	-1.2	0.0
FEB 96	0.1	-0.3	-0.5	1.7	1.4	-1.1	-0.7	0.4	-1.1	-1.4	-0.6
MAR 96	0.7	1.0	-0.3	0.3	-0.4	-1.2	-0.2	0.0	-1.1	-1.5	-0.3
APR 96	0.8	0.5	-0.5	2.4	0.6	-0.7	-1.3	1.1	-1.6	-1.1	-0.5
MAY 96	0.3	1.2	1.2	0.6	0.0	-0.6	-1.3	0.8	-1.0	-1.3	0.3
JUN 96	1.4	1.6	-0.2	-1.4	0.4	-0.6	0.8	1.0	-1.4	-2.0	0.5
JUL 96	0.7	0.6	-0.6	0.8	0.1	-0.7	-0.3	1.3	-1.4	-2.1	-0.1
AUG 96	0.4	0.4	-0.3	-1.6	1.0	-0.9	0.9	0.8	-1.3	-1.1	0.3
SEP 96	0.5	-0.7	-1.7	1.7	0.3	-0.9	-2.3	1.2	-1.3	-1.9	0.5
OCT 96	0.4	-0.1	-0.8	-0.3	1.9	-0.8	-2.1	0.9	-1.8	-1.8	0.5

第１表（ｂ）　エルニーニョ監視指数（続き）
Table 1 (b)　El Niño monitoring indices (continued).



第1図　太平洋赤道域の海面水温偏差時系列図

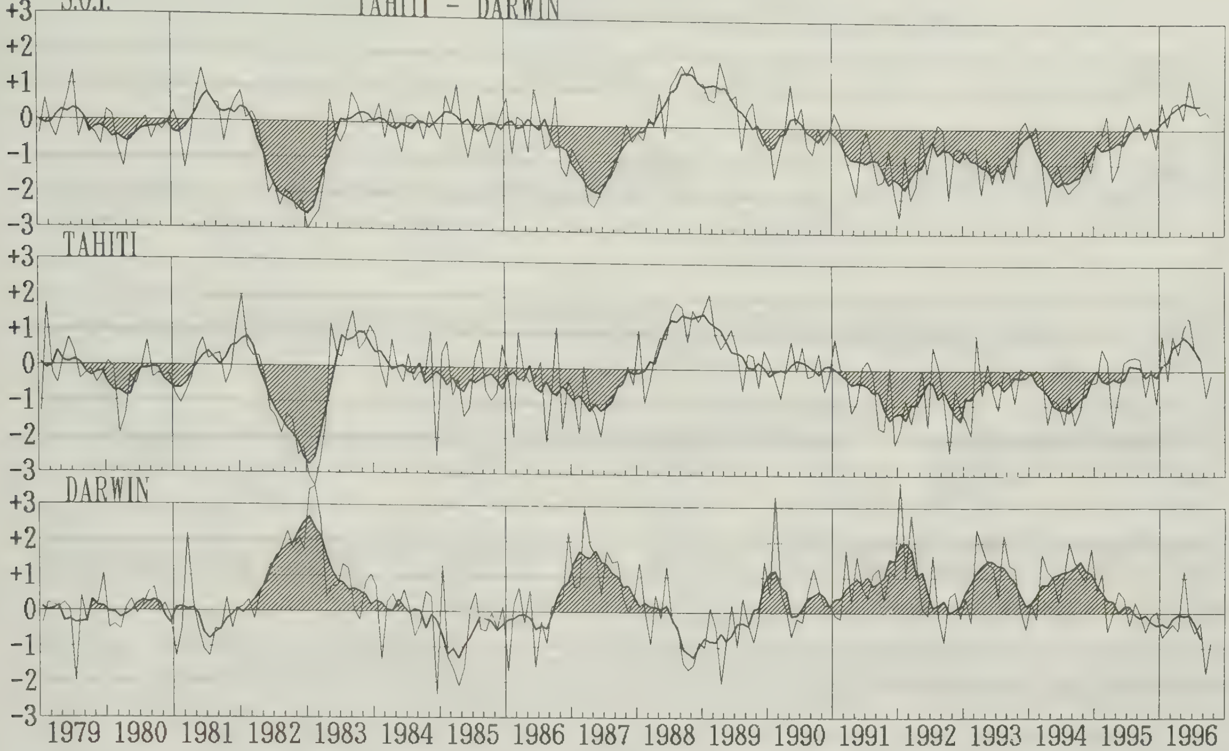
Fig.1 Time series of monthly mean SST anomalies (°C) in the equatorial Pacific Ocean for the areas indicated at the bottom.
Thin lines show the monthly means and thick lines their 5-month running means.　Positive anomalies (A, B, C) and negative anomalies (D) are shaded.　Anomalies are computed from the JMA climatology (1961-1990).



第2図　太平洋月平均海面水位偏差時系列図

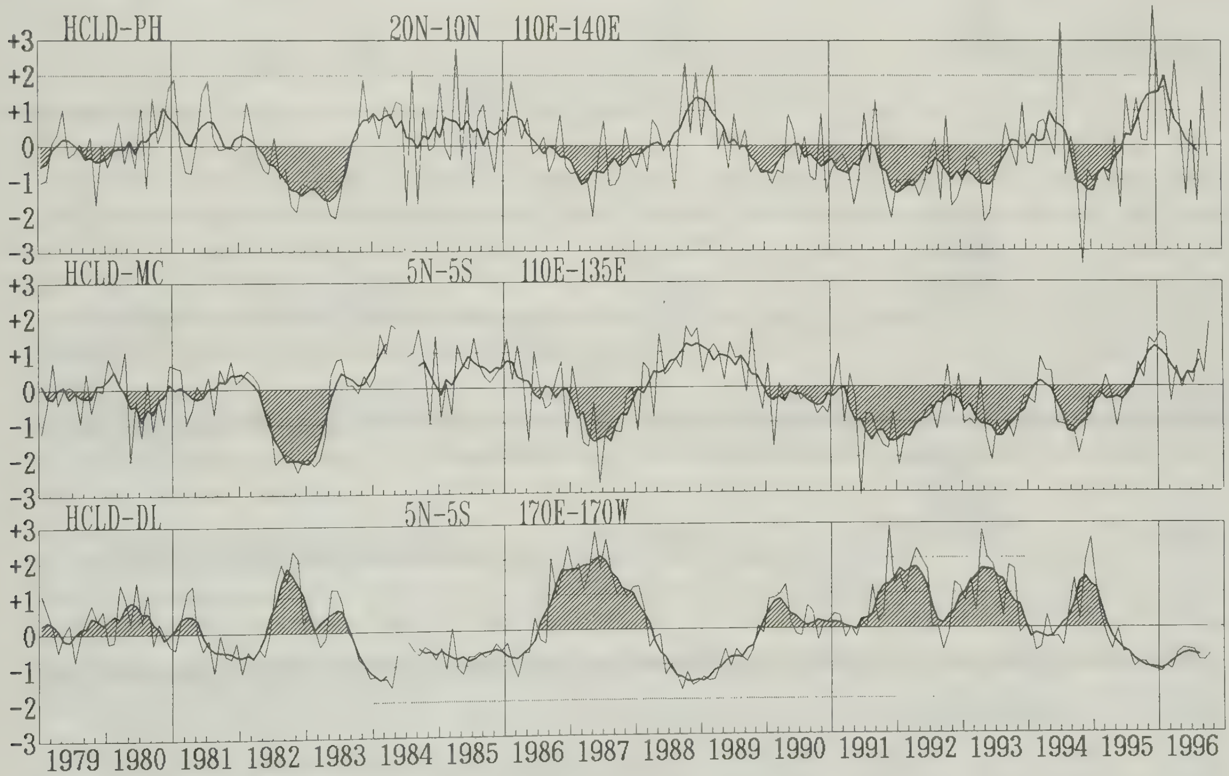
Fig.2 Time series of sea level anomalies computed from 1976-1990 monthly mean values obtained from the stations indicated at the bottom. Thin lines show the monthly mean and thick lines their 5-month running means. Positive anomalies are shaded.

Time Series of SOI and High-Cloud Amount Index



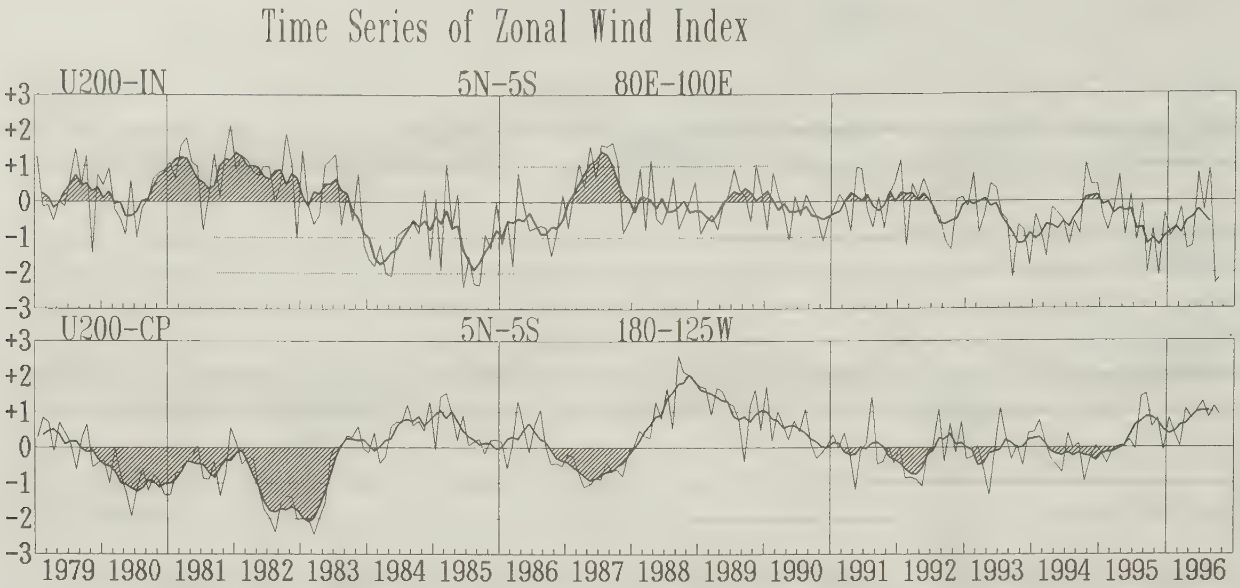
第3図　南方振動指数及び海面気圧偏差時系列図

Fig.3 Time series of the Southern Oscillation Index (top) and monthly mean sea level pressure standardized anomalies at Tahiti (middle) and Darwin (bottom). Thin lines show the monthly mean and thick lines their 5-month running means. Negative anomalies (top, middle) and posotive anomalies (bottom) are shaded. Normals and standard deviations are computed from 1961-1990 base periods.



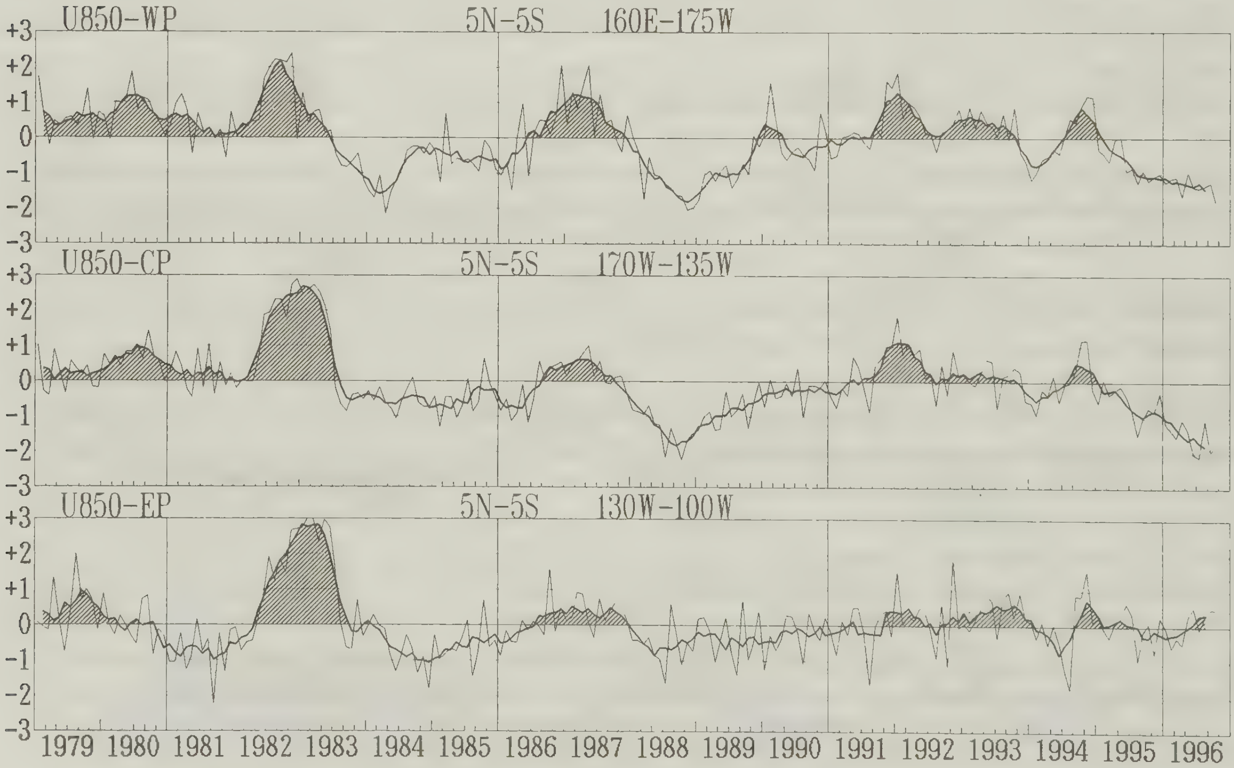
第4図　月平均上層雲量指数時系列図

Fig.4 Time series of high-cloud amount index averaged over the area 20°N-10°N, 110°E-140°E (top), 5°N-5°S, 110°E-135°E (middle), and 5°N-5°S, 170°E-170°W (bottom). Thin lines show the monthly mean and thick lines their 5-month running means. Negative anomalies (top, middle) and positive anomalies (bottom) are shaded. Normals and standard deviations are computed from 1978-1990 base periods.



第5図-1　赤道域東西風指数(200ｈＰａ)時系列図

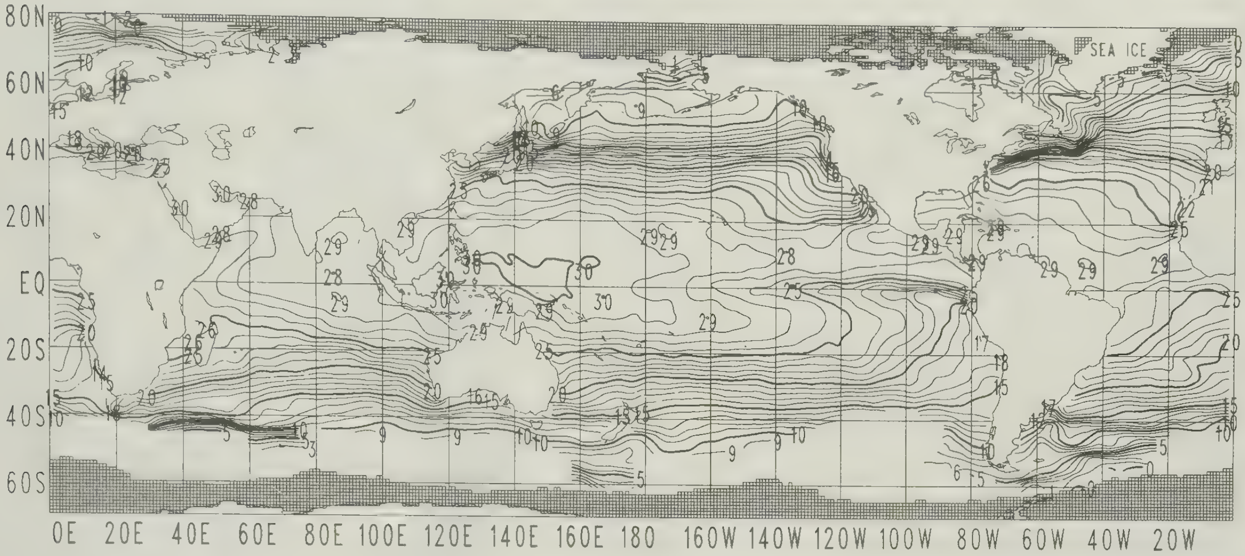
Fig.5-1 Time series of 200hPa zonal wind index averaged over the areas of 5°N-5°S, 80°E-100°E (top), and 5°N-5°S, 180°-125°W (bottom).
Thin lines show the monthly mean and thick lines their 5-month running means.
Positive anomalies (top) and negative anomalies (bottom) are shaded.
Normals and standard deviations are computed from 1979-1990 base periods.

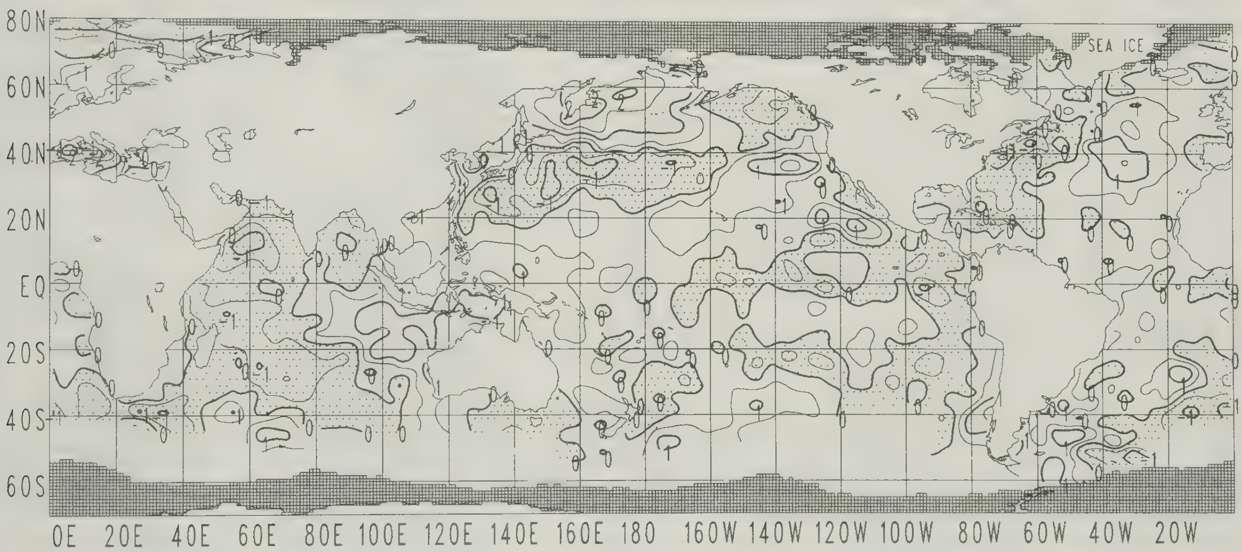


第5図-2　赤道域東西風指数(850ｈＰａ)時系列図

Fig.5-2 Time series of 850hPa zonal wind index averaged over the areas of 5°N-5°S, 160°E-175°W (top), 5°N-5°S, 170°W-135°W (middle), and 5°N-5°S, 130°W-100°W (bottom). Thin lines show the monthly mean and thick lines their 5-month running means. Positive anomalies are shaded.
Normals and standard deviations are computed from 1979-1990 base periods.

SST & Anomalies in the Global Ocean

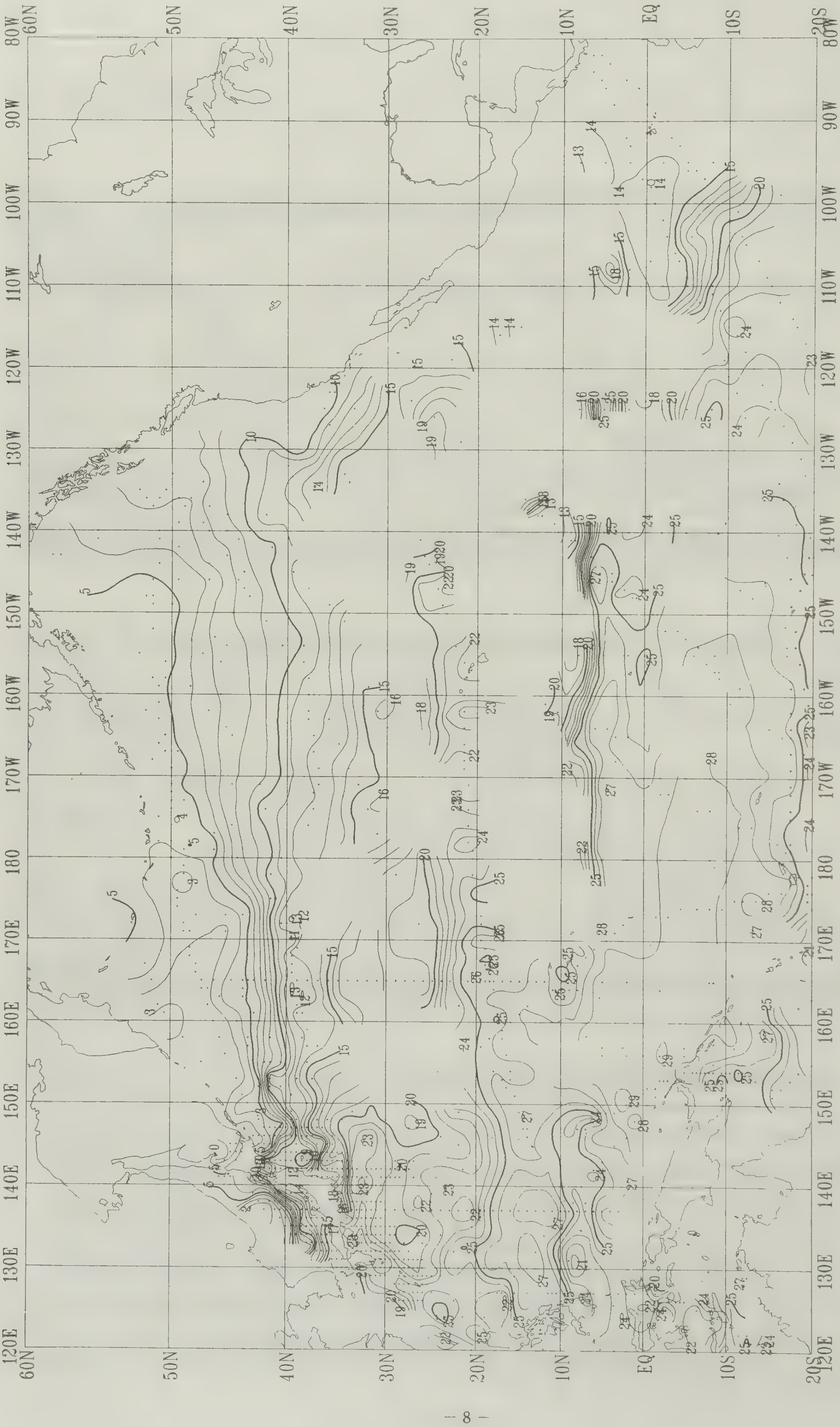




第6図　全球月平均海面水温図（上）及び偏差図（下）（1996年10月）

Fig.6 Monthly mean sea surface temperature over the global ocean (top) and anomalies (bottom) for OCT 1996. Anomalies are computed from the JMA climatology (1961-1990) (Marine Department of JMA, 1991, Climatic charts of sea surface temperatures of the western North Pacific and the global ocean). Contour interval is 1°C (top) and additional anomaly contours of ±0.5°C are shown as thin lines. Negative anomalies are spotted. Maximum coverage of sea ice is shaded. Data sources for sea ice are U.S. National Ice Center (polar regions) and JMA (the Sea of Okhotsk).

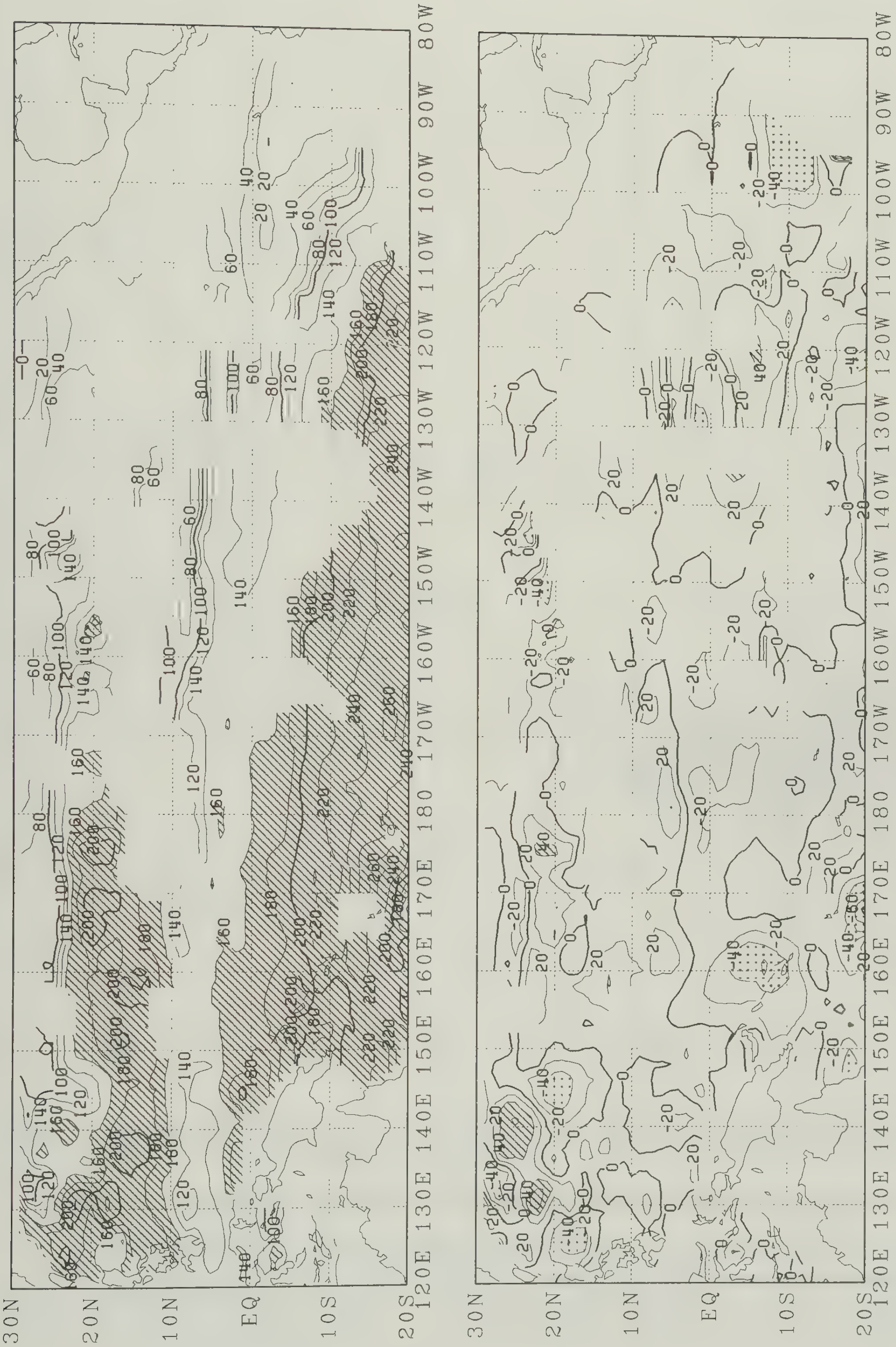
100m Temperature in the Pacific Ocean



第7図　太平洋表層水温(深さ100m)図 (1996年10月)

Fig.7 Subsurface (100m) temperatures in the Pacific Ocean for OCT 1996. Contour interval is 1°C. Observation points are denoted by dots.

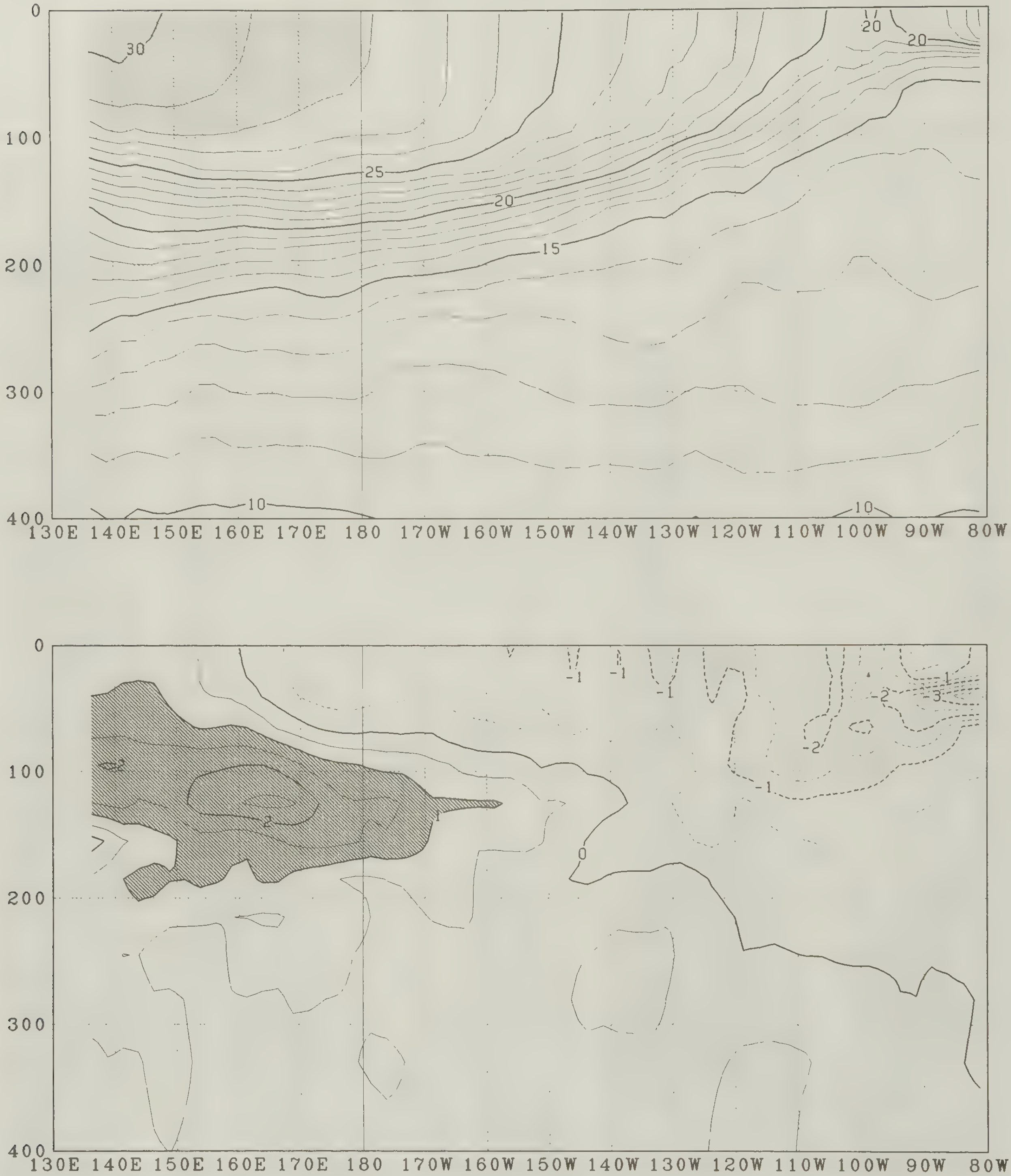
Depth of 20C & Anomalies in the Pacific Ocean



第8図 太平洋20℃深度図（上）及び偏差図（下）（1996年10月）

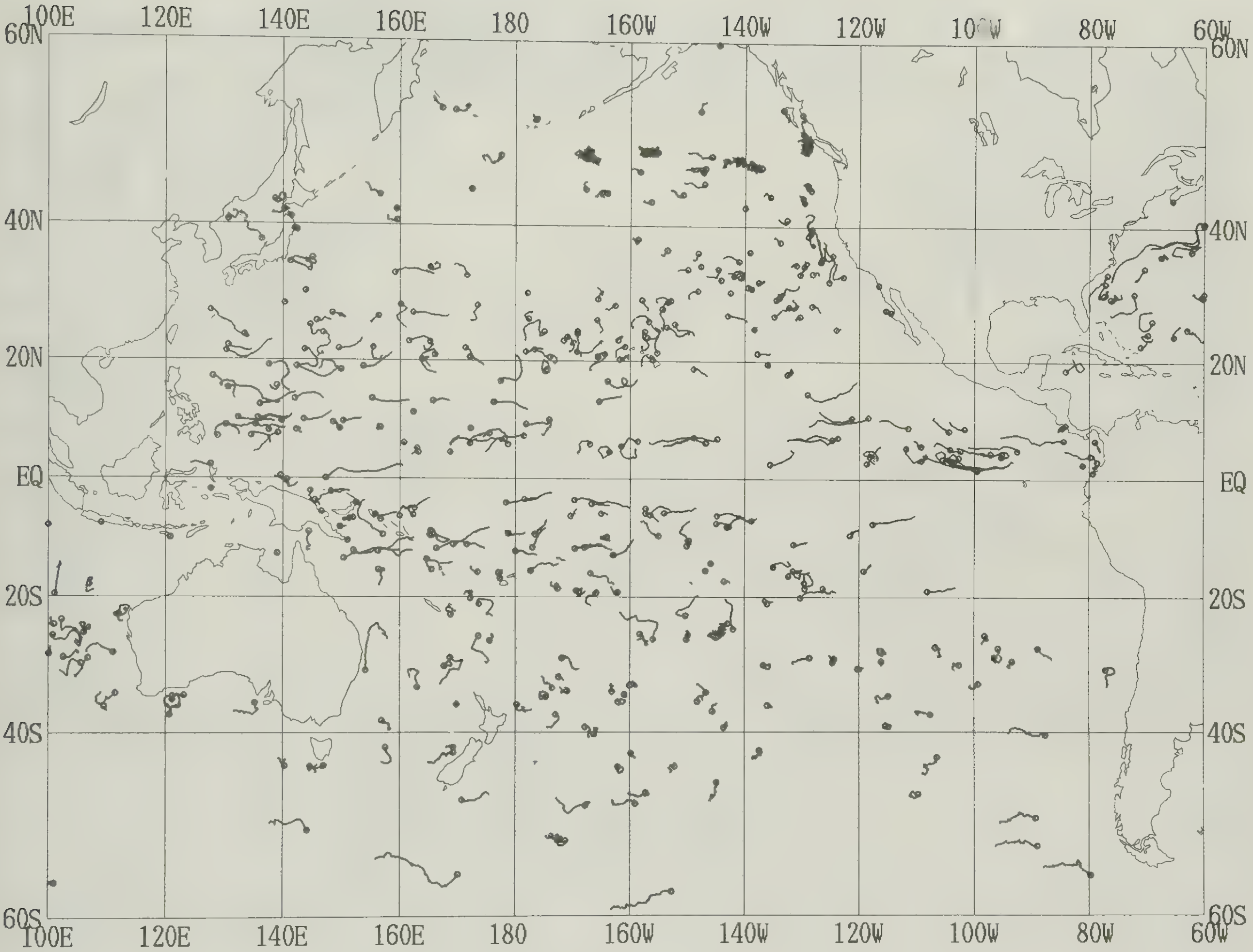
Fig.8 Depth of the 20°C isotherm in the Pacific Ocean (top) and anomalies (bottom) for OCT 1996. Anomalies are computed from the climatology (Levitus, 1982, Climatological Atlas of the World Ocean, NOAA). Contour interval is 20m. Values greater than 160m in top panel are shaded. In bottom panel values greater than +40m are shaded and values less than -40m are spotted.

Depth–Longitude Sections of Equatorial Temperature & Anomalies



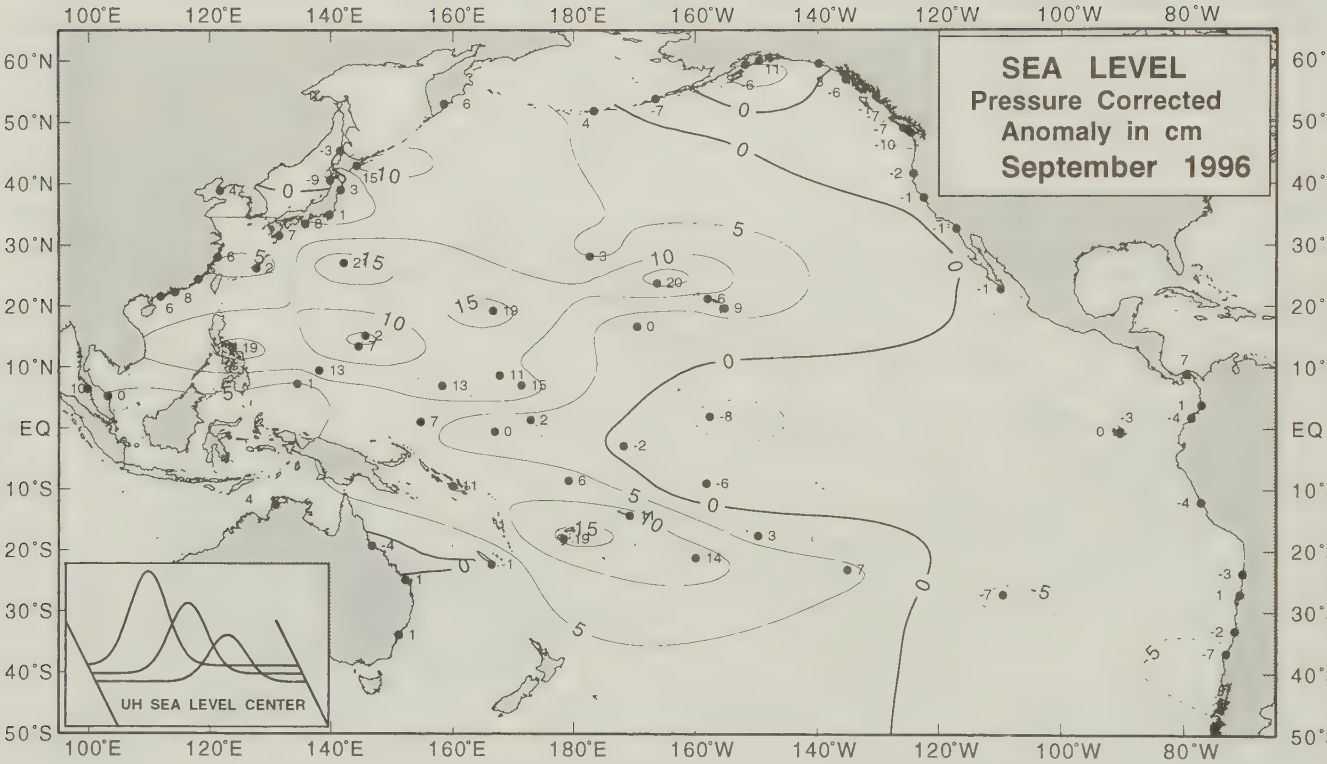
第9図　太平洋赤道に沿う表層水温（上）及び偏差（下）の深度－経度断面図（1996年10月）

Fig.9 Depth-longitude sections of temperature (top) and anomalies (bottom) along the equator in the Pacific Ocean for OCT 1996. Data are derived from the Ocean Data Assimilation System of JMA. Contour interval is 1°C (top) and 0.5°C (bottom). Values greater than 28°C in top panel are shaded. In bottom panel values greater than 1°C are shaded and values less than -1°C are spotted. Anomalies are computed from 1987-1995 base period means.



第10図　太平洋ブイ流跡図(1996年10月)

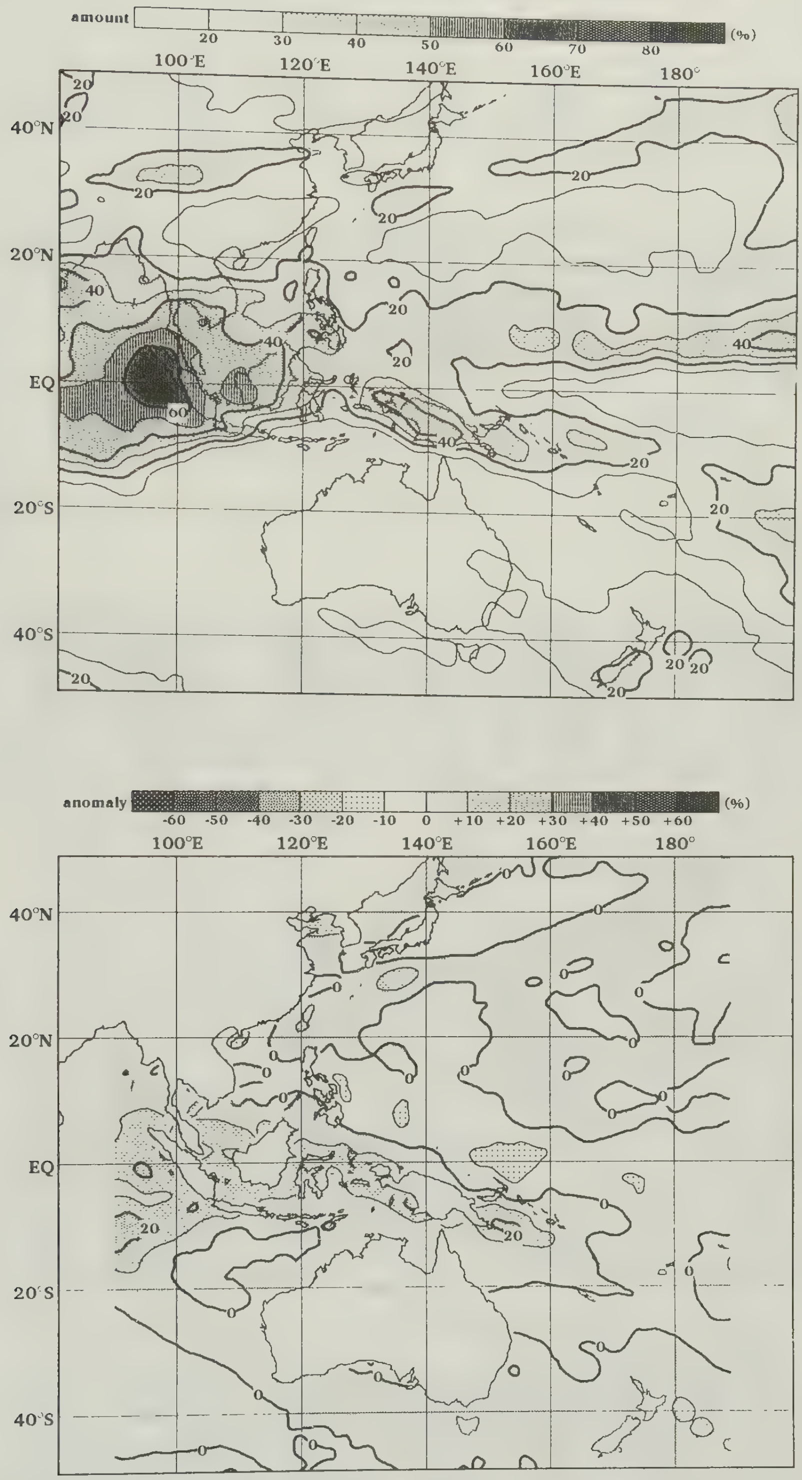
Fig.10　Movements of drifting buoys in the Pacific Ocean during OCT 1996.　Each track is for one buoy. Small circles represent last positions for the month.



第11図　太平洋海面水位偏差図（ 1996年 9月 ）

Fig.11 Monthly sea level anomalies for SEP 1996 obtained from mean sea level (1975-1986) adjusted for atmospheric pressure.
This figure is prepared by the SOC of ISLP-PAC, Dept. of Oceanography, Univ. of Hawaii.

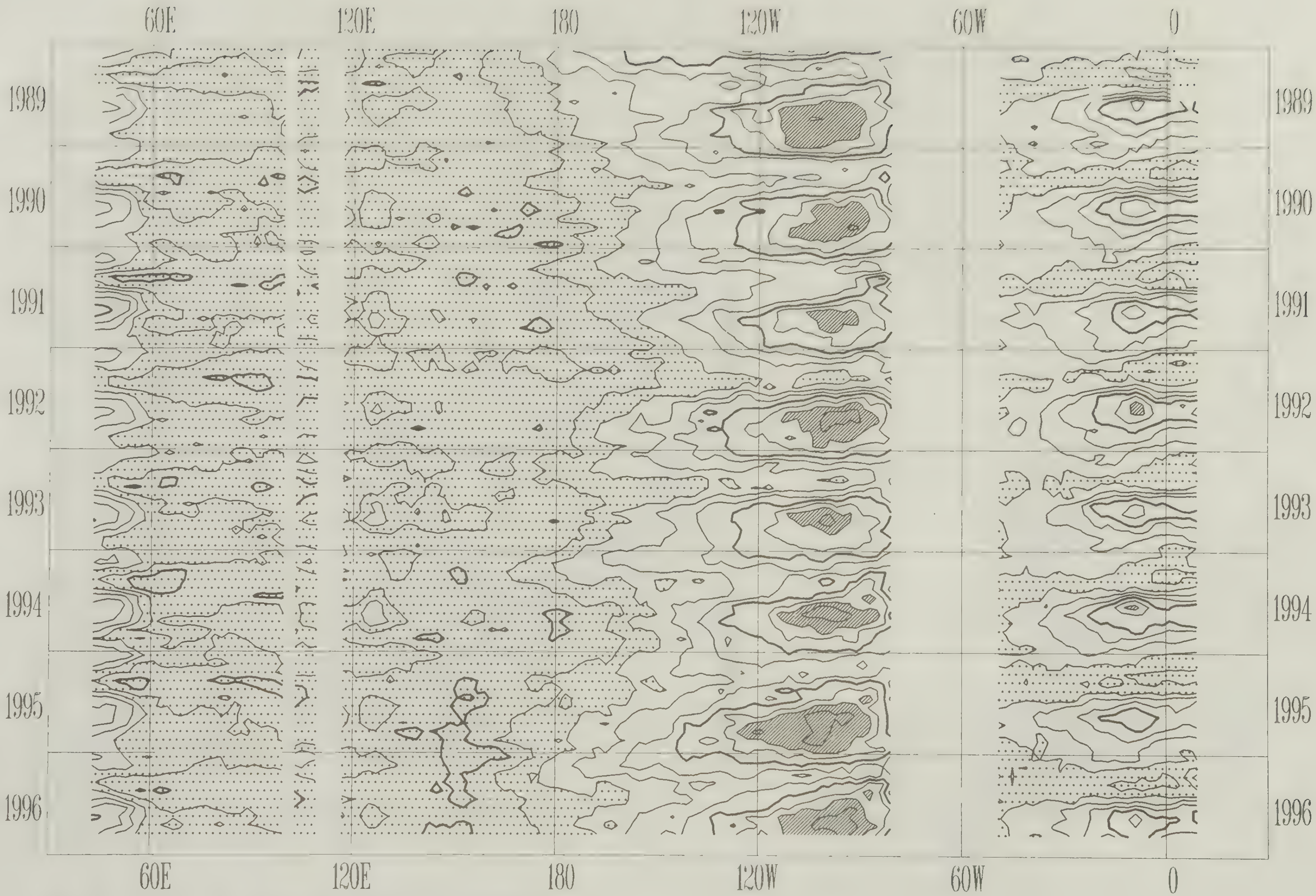
High-Cloud Amount & Anomalies



第12図　西太平洋月平均上層雲量分布図及び偏差図（1996年10月）

Fig.12 Monthly mean of the high-cloud amount (%, top) and its anomalies (%, bottom) in the western Pacific for OCT 1996. Contour interval is 10%. Anomalies are computed from 1978-1990 base period means.

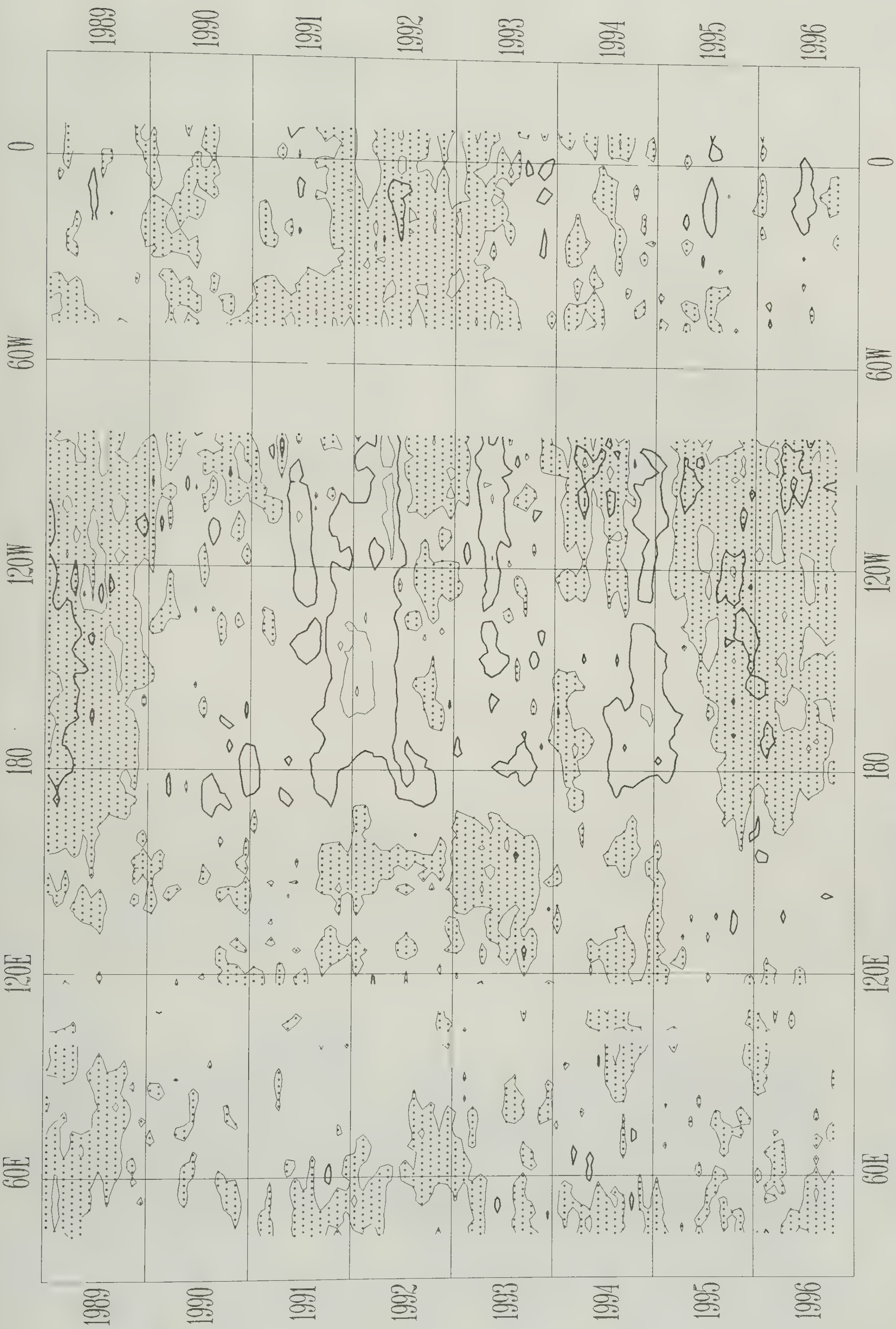
Time-Longitude Section of SST



第13図　赤道に沿う海面水温の時間－経度断面図

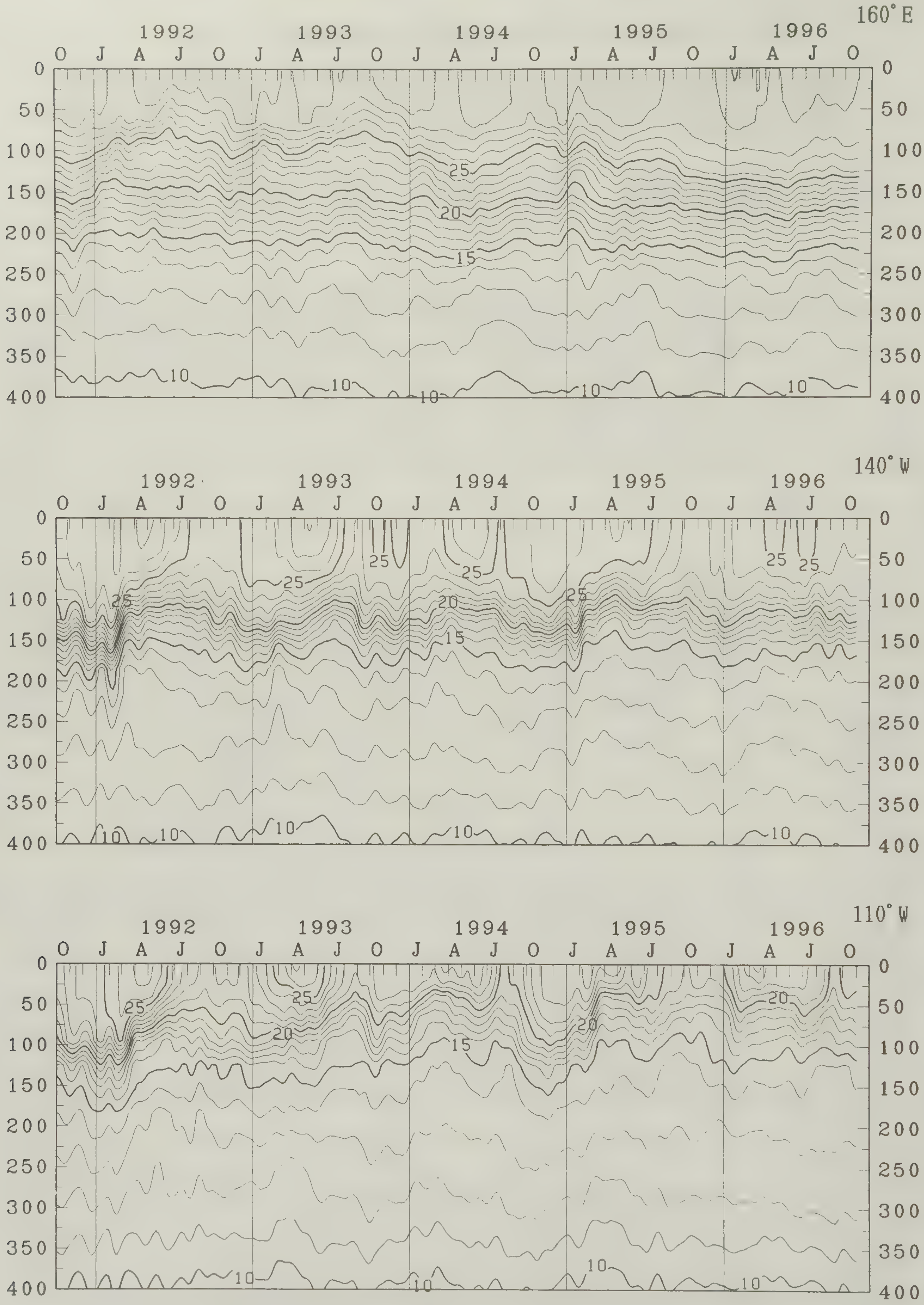
Fig.13 Time-longitude section of SSTs along the equator (2°N-2°S) in the global ocean. Contour interval is 1°C, with thick contour lines at 25 and 30°C. SST values greater than 28°C are spotted and values less than 23°C are shaded.

Time-Longitude Section of SST Anomalies



第14図　赤道に沿う海面水温偏差の時間－経度断面図

Fig.14 Time-longitude section of SST anomalies along the equator (2°N-2°S) computed from the JMA climatology (1961-1990). Contour interval is 1°C, with thick contour lines at +1°C and -1°C. Negative anomalies are spotted.

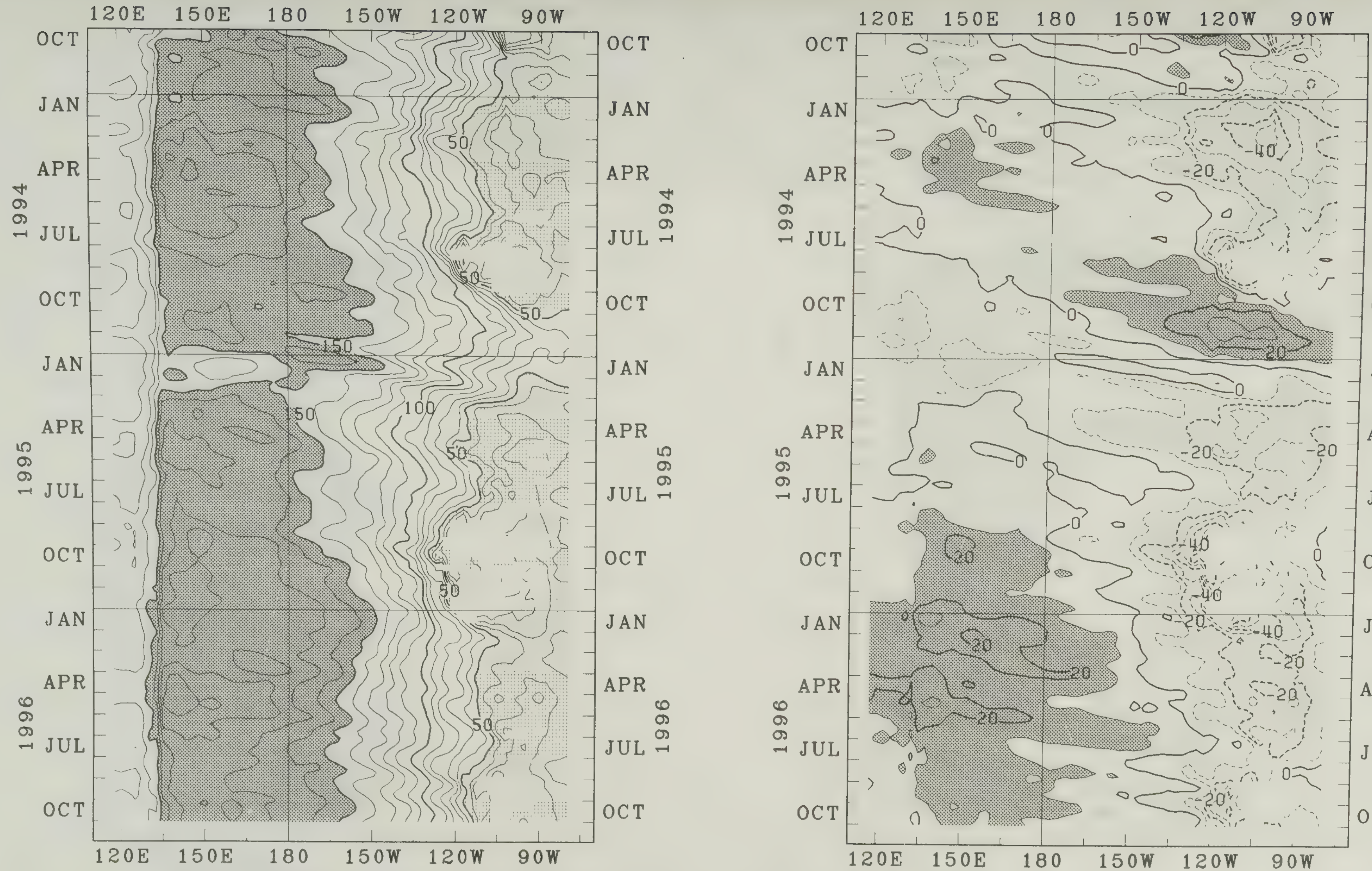


第15図　太平洋赤道域の表層水温の時間－深度断面図

（上：西部、中：中部、下：東部）

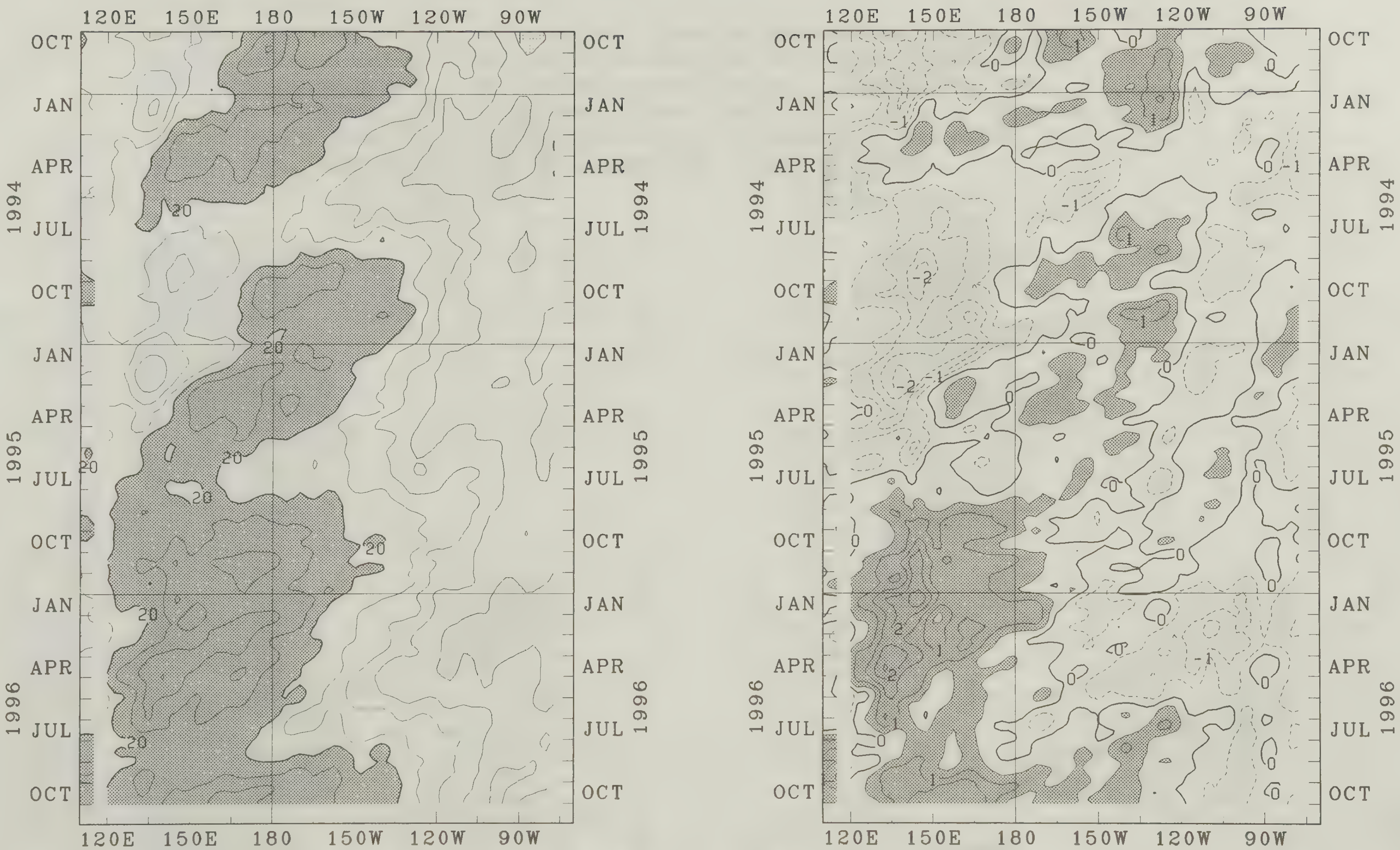
Fig.15 Time-depth sections of equatorial subsurface temperature for the western Pacific (top, 160°E), the central Pacific (middle, 140°W) and the eastern Pacific (bottom, 110°W). Data are derived from the Ocean Data Assimilation System of JMA. Contour interval is 1°C. Values greater than 28°C are shaded.

Time-Longitude Section of Depth of 20C & Anomalies (Eq.)



第16図　太平洋の赤道に沿う20℃深度（左）及び偏差（右）の時間－経度断面図

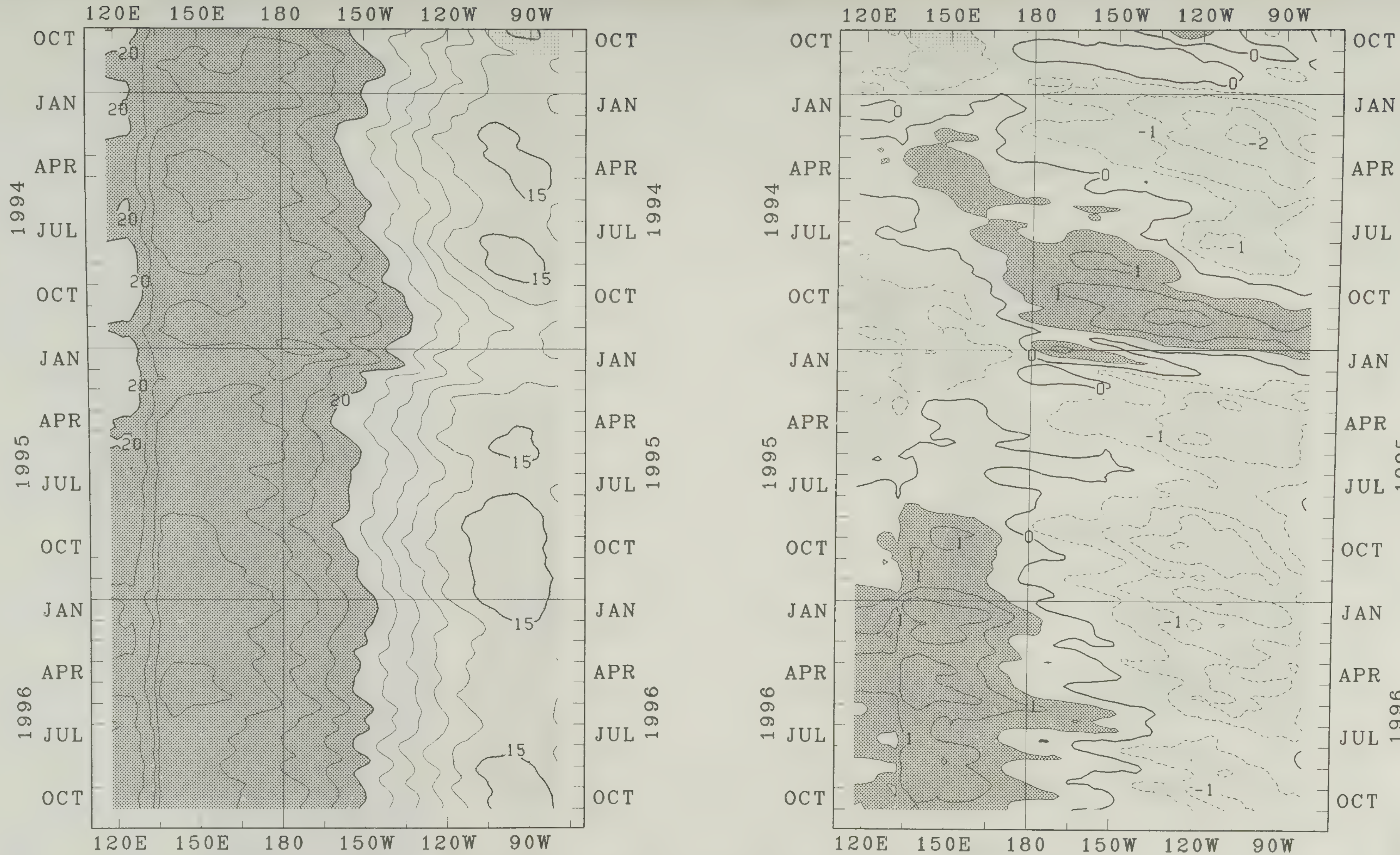
Fig.16 Time-longitude sections of depth of the 20°C isotherm along the equator (left) and anomalies (right) in the Pacific Ocean. Data are derived from the Ocean Data Assimilation System of JMA. Contour interval is 10m. Values in left panel greater than 150m are shaded and values less than 50m are spotted. Dashed contours in right panel indicate negative anomalies. Anomalies are computed from 1987-1995 base period means.



第17図　太平洋の北緯6度線に沿う海洋表層の貯熱量（左）及び偏差（右）の時間－経度断面図

Fig.17 Time-longitude sections of ocean heat content in the upper 260m along 6°N (left) and anomalies (right) in the Pacific Ocean. Data are derived from an Ocean Data Assimilation System of JMA. Contour interval is 1°C (left) and 0.5°C (right). Values in the left panel greater than 20°C are shaded and values less than 16°C are spotted. Dashed contours in right panel indicate negative anomalies. Anomalies are computed from 1987-1995 base period means.

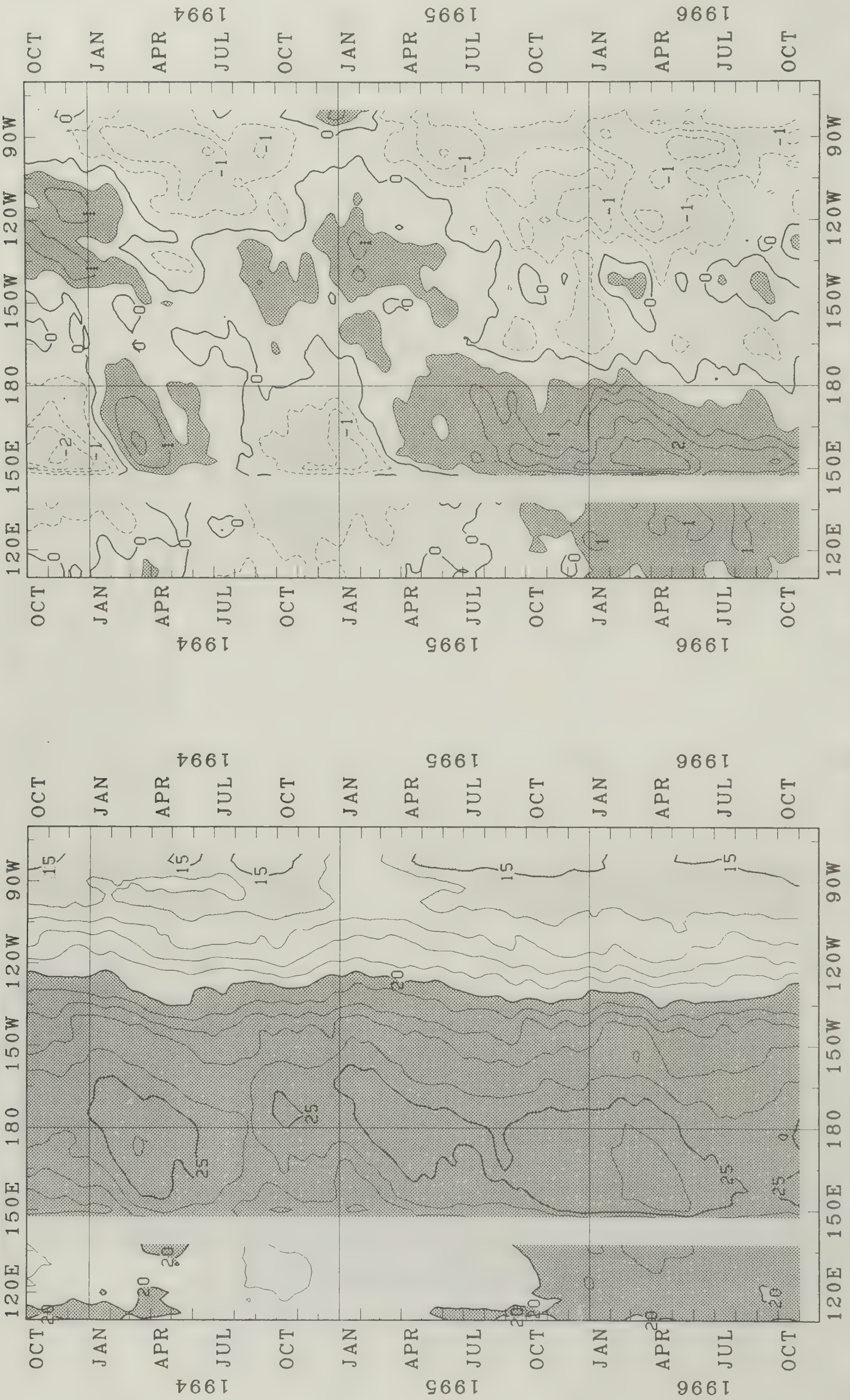
Time-Longitude Section of Ocean Heat Content & Anomalies (Eq.)



第18図　太平洋の赤道に沿う海洋表層の貯熱量（左）及び偏差（右）の時間－経度断面図

Fig.18 Time-longitude sections of ocean heat content in the upper 260m along the equator (left) and anomalies (right) in the Pacific Ocean. Data are derived from the Ocean Data Assimilation System of JMA. Contour interval is 1°C (left) and 0.5°C (right). Values in the left panel greater than 20°C are shaded and values less than 16°C are spotted. Dashed contours in right panel indicate negative anomalies. Anomalies are computed from 1987-1995 base period means.

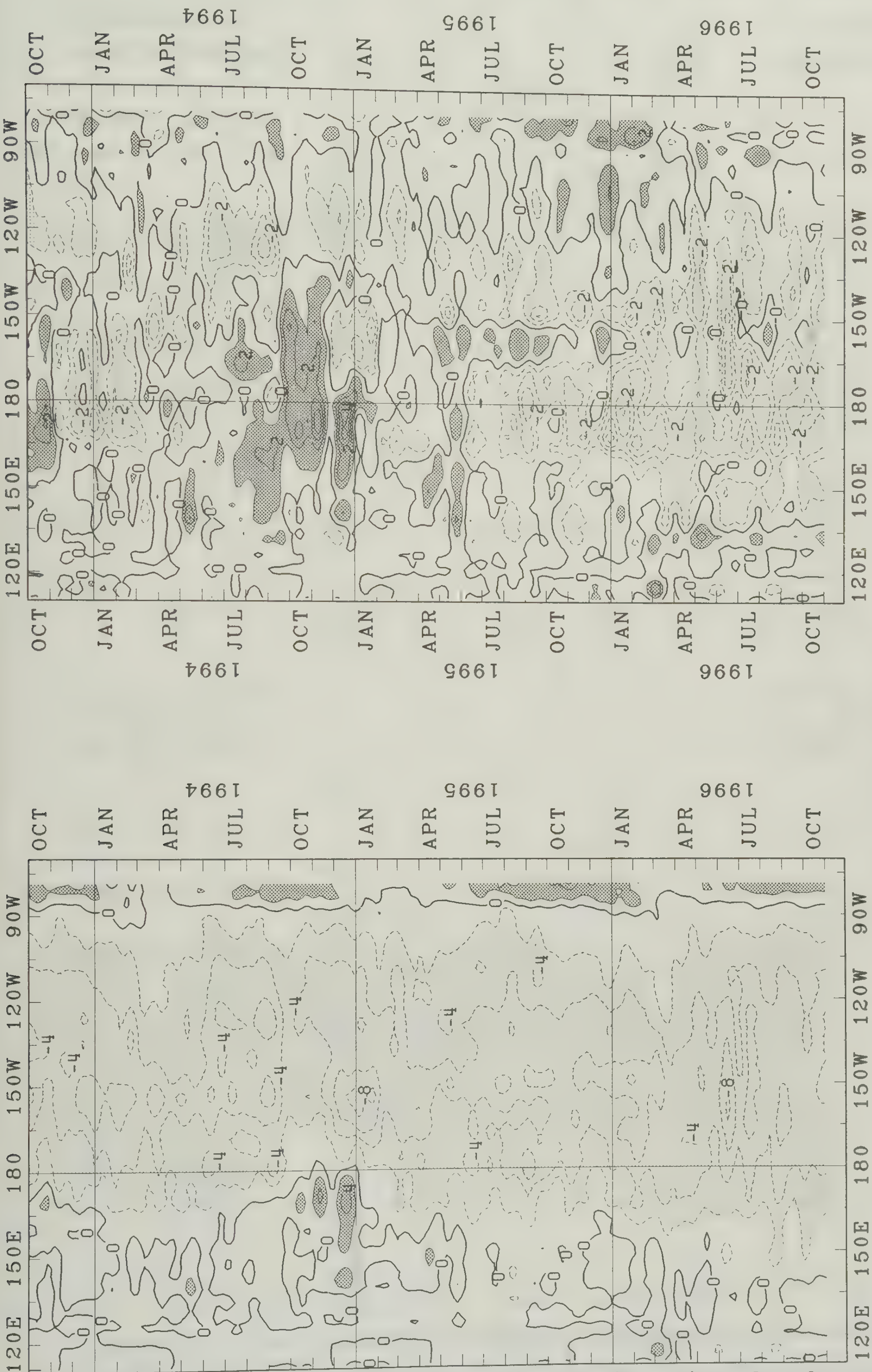
Time-Longitude Section of Ocean Heat Content & Anomalies (6S)



第19図　太平洋の南緯6度線に沿う海洋表層の貯熱量（左）及び偏差（右）の時間－経度断面図

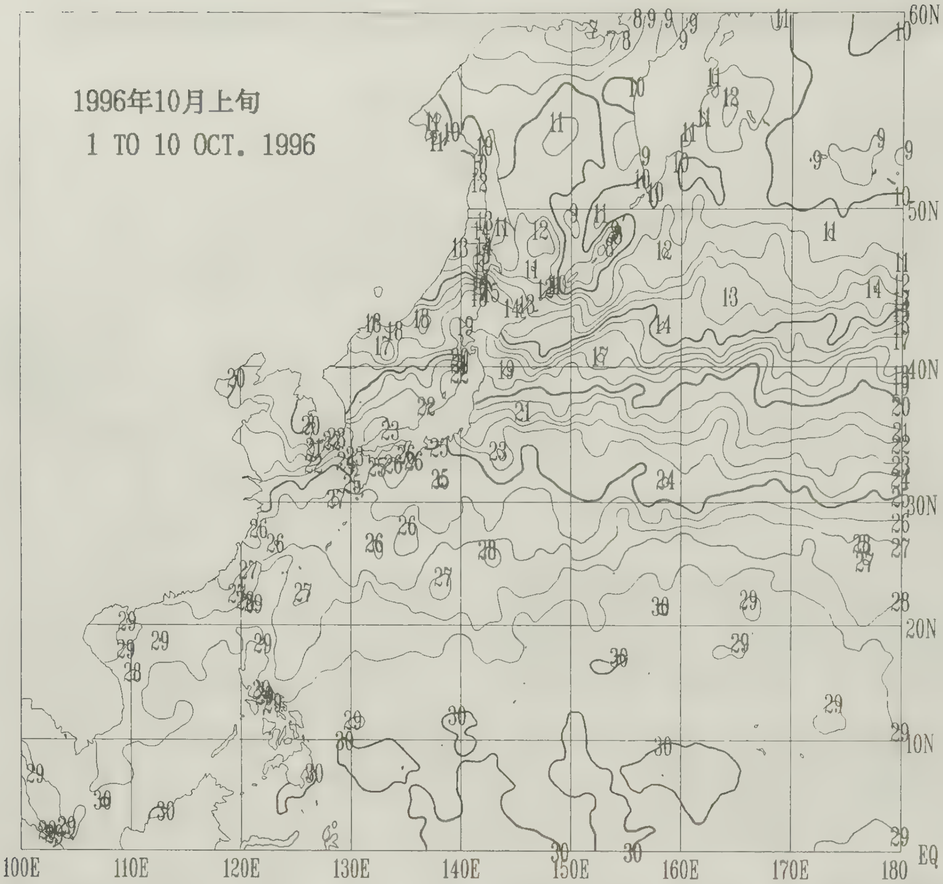
Fig.19 Time-longitude sections of ocean heat content in the upper 260m along 6°S (left) and anomalies (right) in the Pacific Ocean. Data are derived from the Ocean Data Assimilation System of JMA. Contour interval is 1°C (left) and 0.5°C (right) Values in the left panel greater than 20°C are shaded and values less than 16°C are spotted. Dashed contours in right panel indicate negative anomalies. Anomalies are computed from 1987-1995 base period means.

Time-Longitude Section of Surface Zonal Wind Stress & Anomalies (Eq.)



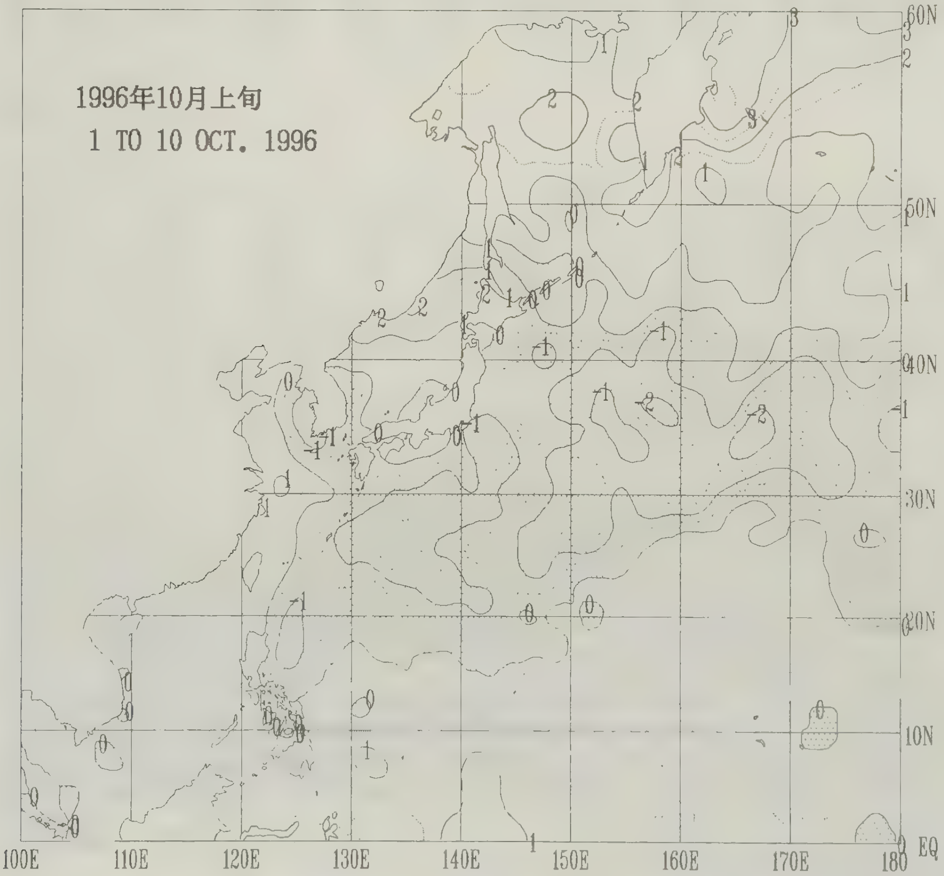
第20図　太平洋の赤道に沿う海面の風応力の東西成分（左）及び偏差（右）の時間－経度断面図

Fig.20 Time-longitude sections of surface zonal wind stress along the equator (left) and anomalies (right) in the Pacific Ocean. Data are derived from the Atmospheric Global Data Assimilation System of JMA. Contour interval is 0.02N/m2 (left) and 0.01N/m2 (right). Dashed contours indicate easterlies (left) and easterly anomalies (right). Anomalies are computed from 1987-1995 base period means.



旬平均沿岸水温(℃)
Coastal Water Temperature

地点名 (Index Number)	水温 Temp.	偏差 Anom.
石　垣(47918)	26.8	-0.5
御前崎(47655)	21.8	-0.4
八丈島(47678)	24.9	-0.1
小名浜(47598)	20.2	-0.4
宮　古(47585)	18.9	0.2
江　差(47428)	19.9	-
浜　田(47755)	22.9	-

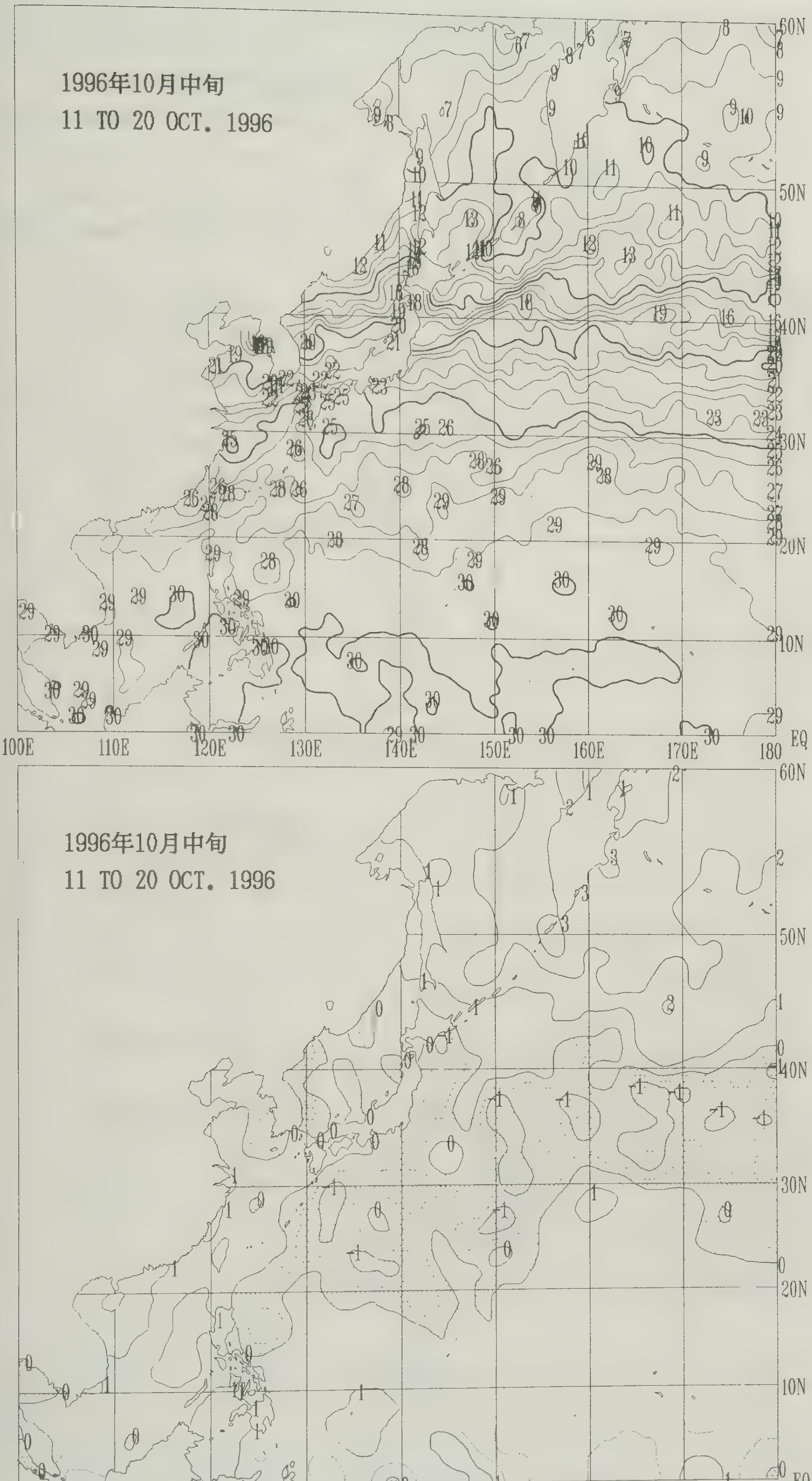


海洋気象ブイロボット
旬平均海面水温(℃)
Ocean Data Buoy SST

日本海	37.9N,134.5E	22.2
四国沖	29.0N,135.0E	26.2
東シナ海	28.2N,126.3E	25.8

第21図 北西太平洋旬平均海面水温図(上)及び偏差図(下)(1996年10月上旬)

Fig.21 Ten-day mean SSTs in the western North Pacific (top) and anomalies (bottom) for the 1st ten-day period in OCT 1996. Anomalies are computed from the JMA climatology (1961-90). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown as broken lines. Negative anomalies are spotted.



旬平均沿岸水温(℃)
Coastal Water Temperature

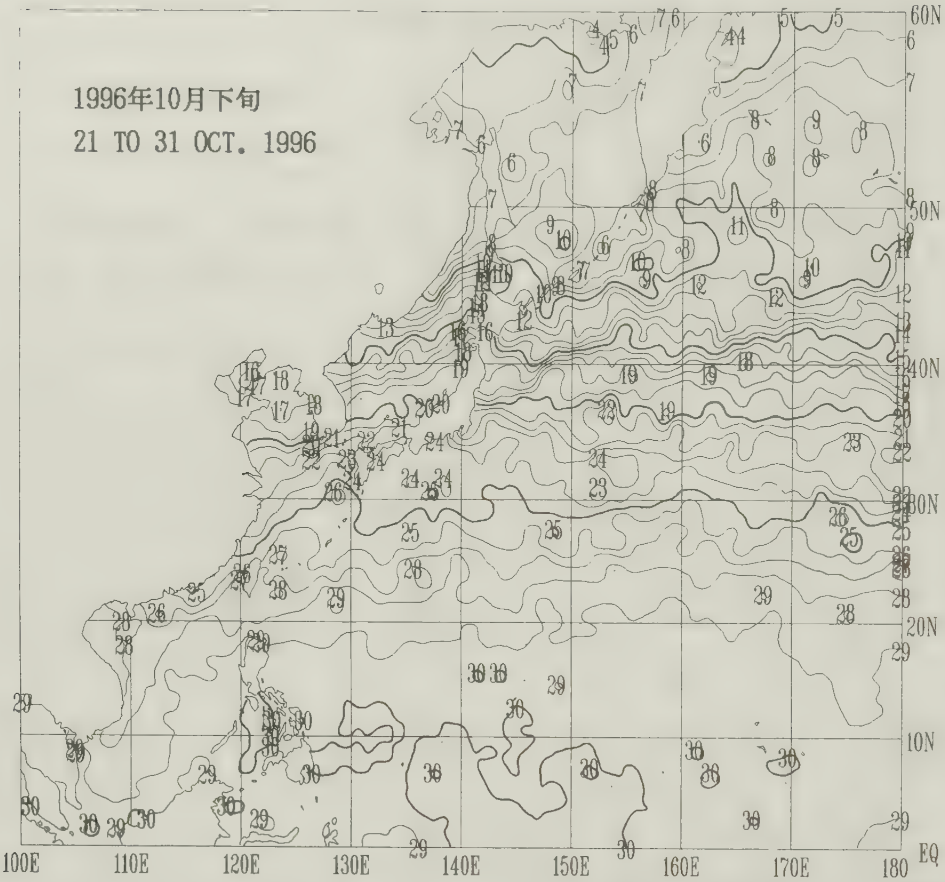
地 点 名 (Index Number)	水温 Temp.	偏差 Anom.
石　垣(47918)	26.3	-0.3
御前崎(47655)	21.7	0.7
八丈島(47678)	24.2	0.1
小名浜(47598)	19.1	-0.5
宮　古(47585)	18.2	0.2
江　差(47428)	17.5	-
浜　田(47755)	22.2	-

海洋気象ブイロボット
旬平均海面水温(℃)
Ocean Data Buoy SST

日 本 海	37.9N,134.5E	21.1
四 国 沖	29.0N,135.0E	25.7
東シナ海	28.2N,126.3E	25.8

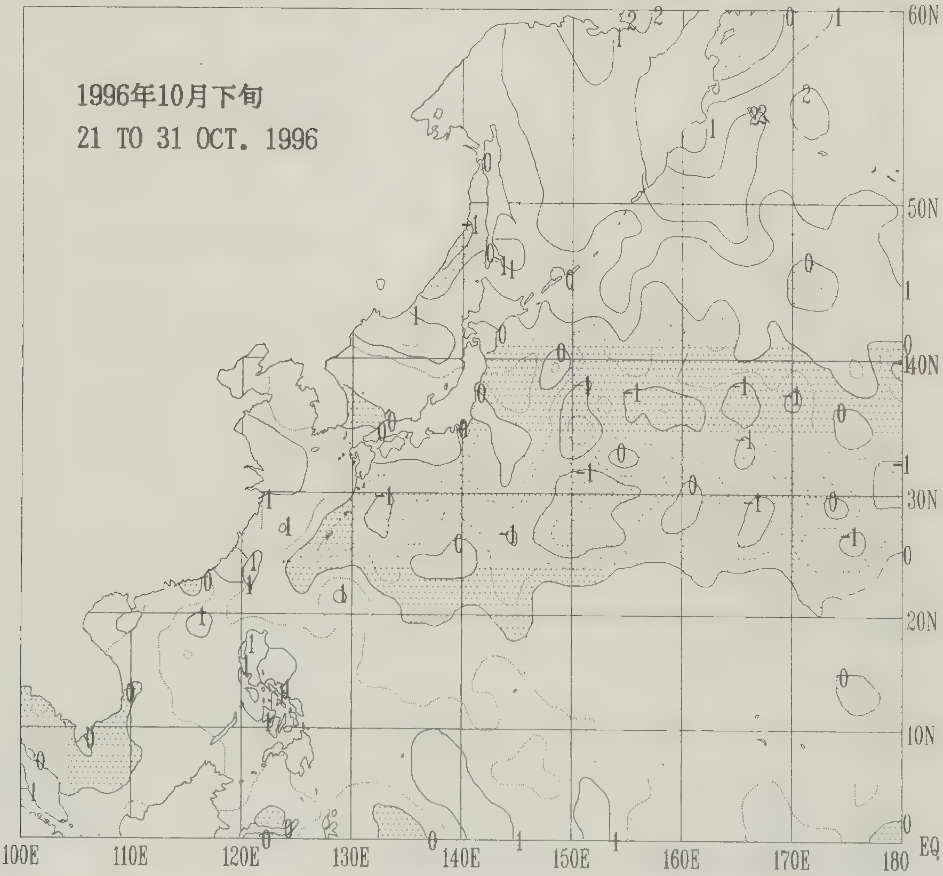
第22図 北西太平洋旬平均海面水温図(上)及び偏差図(下)(1996年10月中旬)

Fig.22 Ten-day mean SSTs in the western North Pacific (top) and anomalies (bottom) for the 2nd ten-day period in OCT 1996. Anomalies are computed from the JMA climatology (1961-90). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown as broken lines. Negative anomalies are spotted.



旬平均沿岸水温(℃)
Coastal Water Temperature

地 点 名 (Index Number)	水温 Temp.	偏差 Anom.
石　垣(47918)	25.9	0.2
御前崎(47655)	20.5	0.9
八丈島(47678)	23.5	0.1
小名浜(47598)	19.0	0.5
宮　古(47585)	17.0	0.1
江　差(47428)	16.3	-
浜　田(47755)	21.0	-

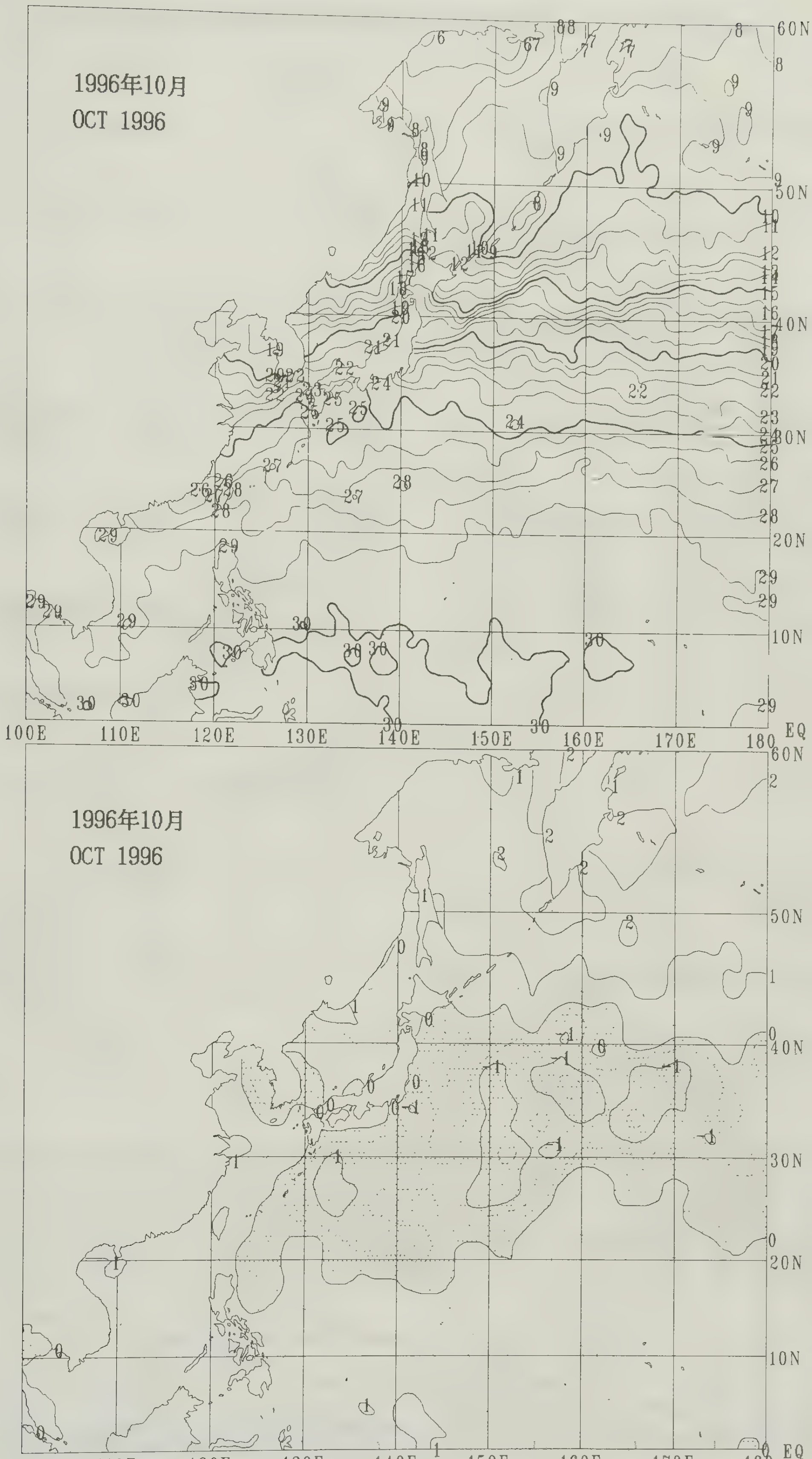


海洋気象ブイロボット
旬平均海面水温(℃)
Ocean Data Buoy SST

日 本 海 37.9N,134.5E
20.3
四 国 沖 29.0N,135.0E
25.1
東シナ海 28.2N,126.3E
25.8

第23図 北西太平洋旬平均海面水温図(上)及び偏差図(下)(1996年10月下旬)

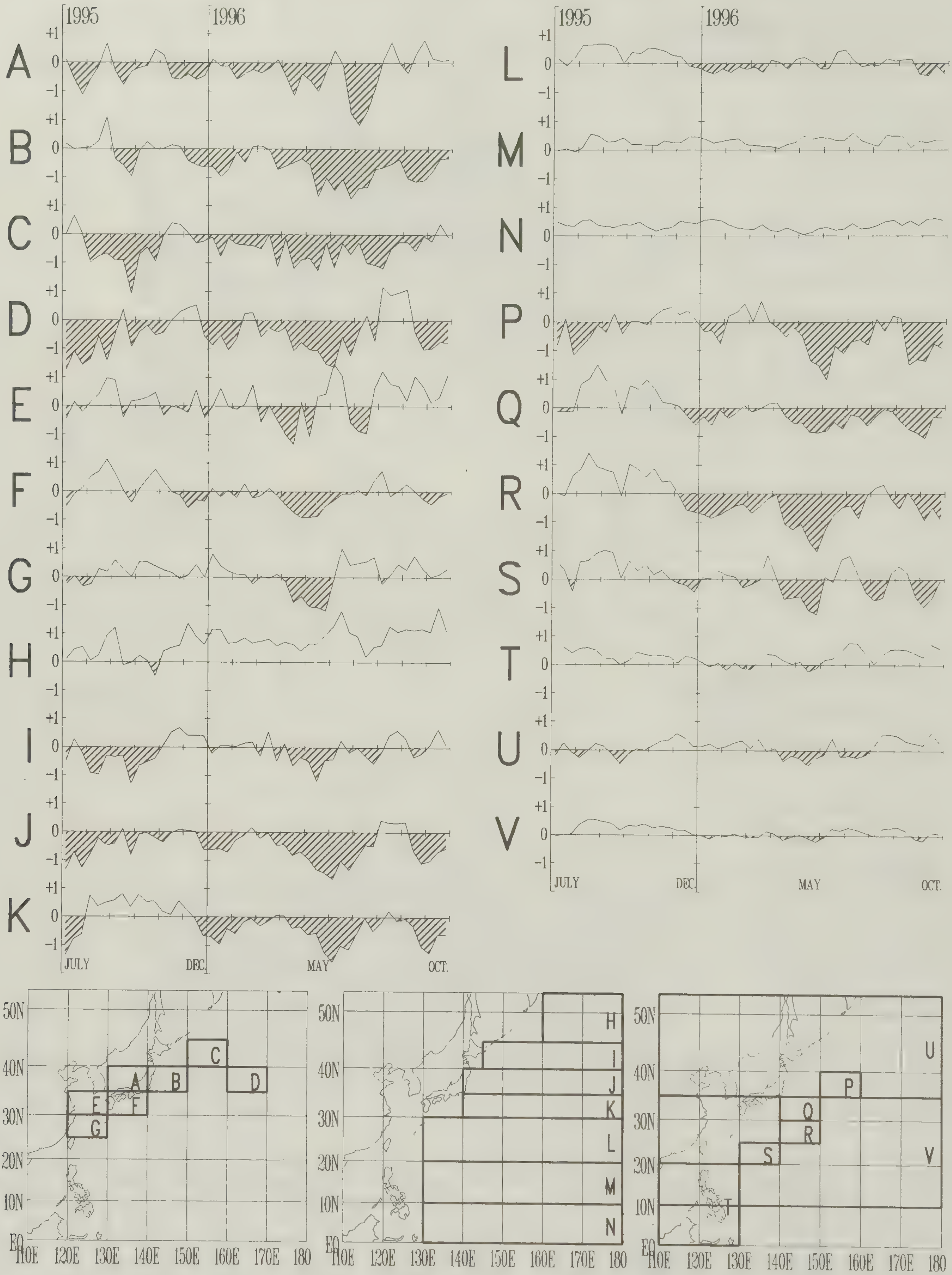
Fig.23 Ten-day mean SSTs in the western North Pacific (top) and anomalies (bottom) for the 3rd ten-day period in OCT 1996. Anomalies are computed from the JMA climatology (1961-90). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown as broken lines. Negative anomalies are spotted.



第24図 北西太平洋月平均海面水温図(上)及び偏差図(下)(1996年10月)

Fig.24 Monthly mean SSTs in the western North Pacific (top) and anomalies (bottom) for OCT 1996. Anomalies are computed from the JMA climatology (1961-1990). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown as broken lines. Negative anomalies are spotted.

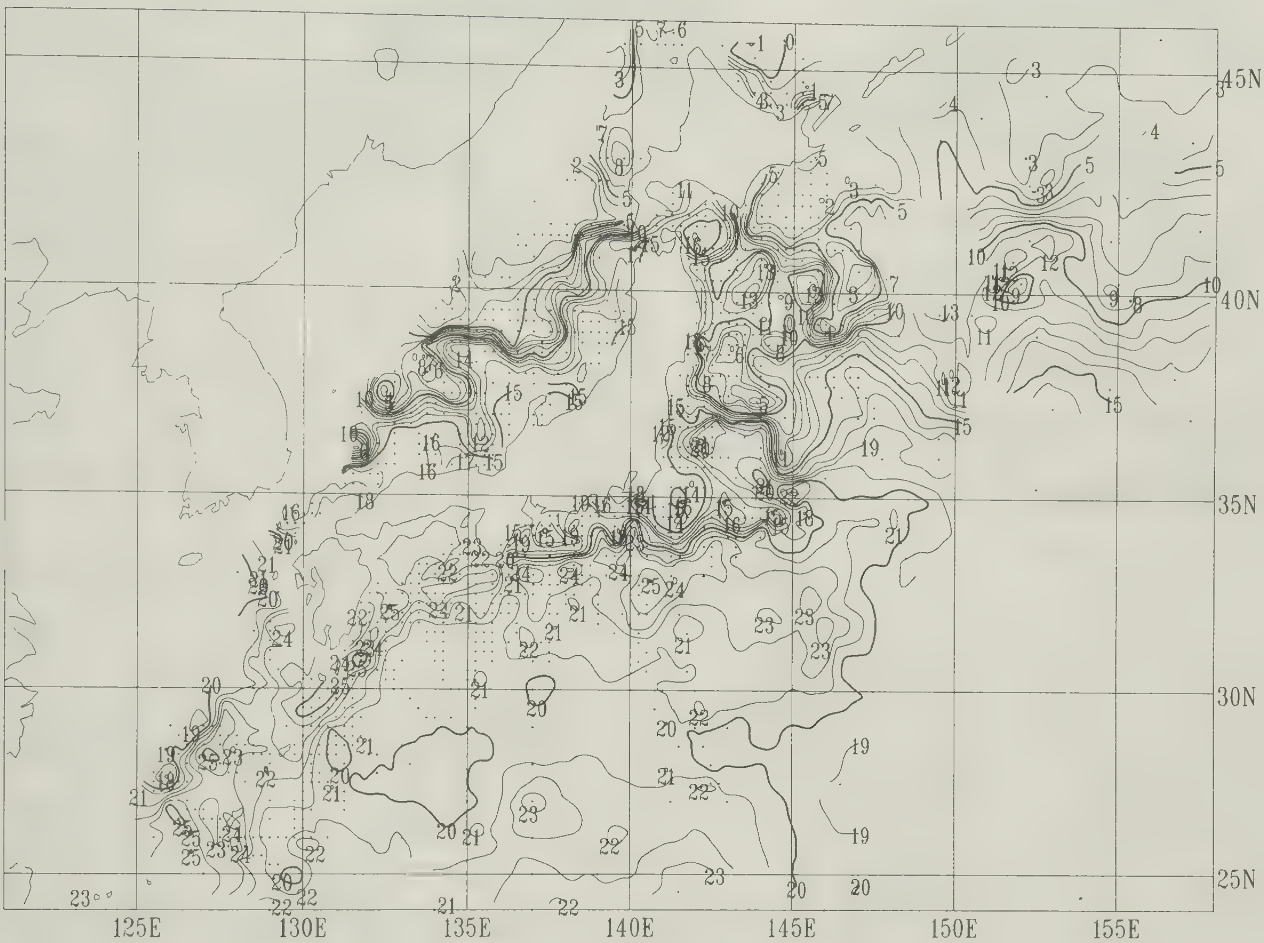
Time Series of Area Mean SST in the Western North Pacific



第25図　北西太平洋旬平均海面水温平年偏差時系列図

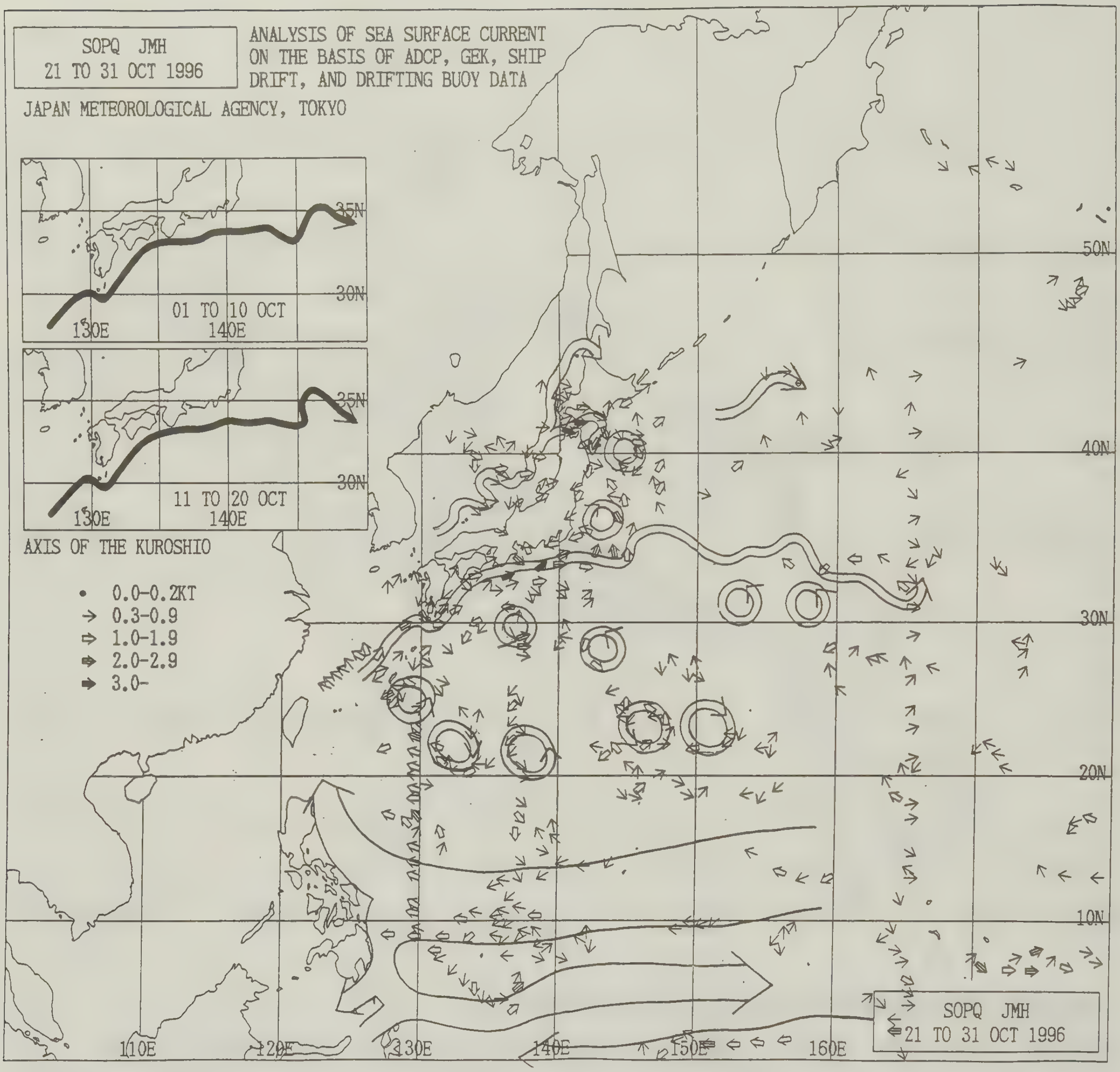
Fig.25 Time series of the ten-day mean sea surface temperature anomalies (°C) in the western North Pacific for the areas indicated at the bottom. Negative anomalies are shaded. Anomalies are computed from the JMA climatology (1961-90).

100m Temperatures in Seas Adjacent to Japan



第26図　日本近海表層水温(深さ100m)図 (1996年10月)

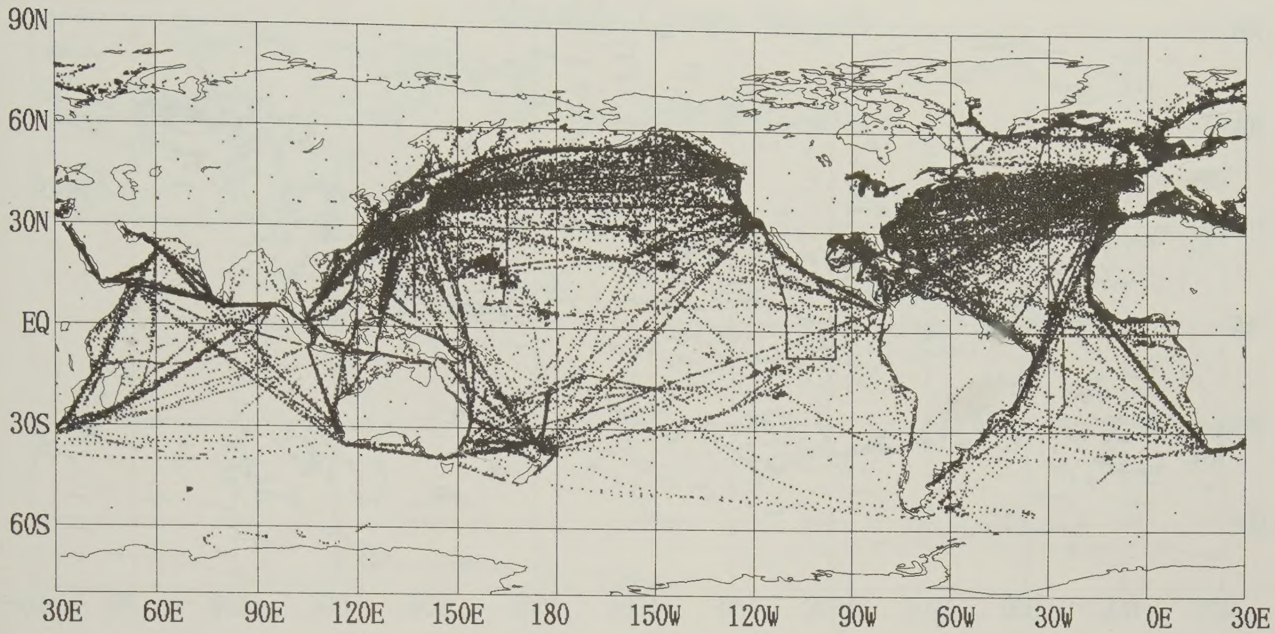
Fig.26 Subsurface (100m) temperatures in seas adjacent to Japan for OCT 1996. Contour interval is 1°C. Observation points are denoted by dots.



第27図　北西太平洋海流図（1996年10月下旬）

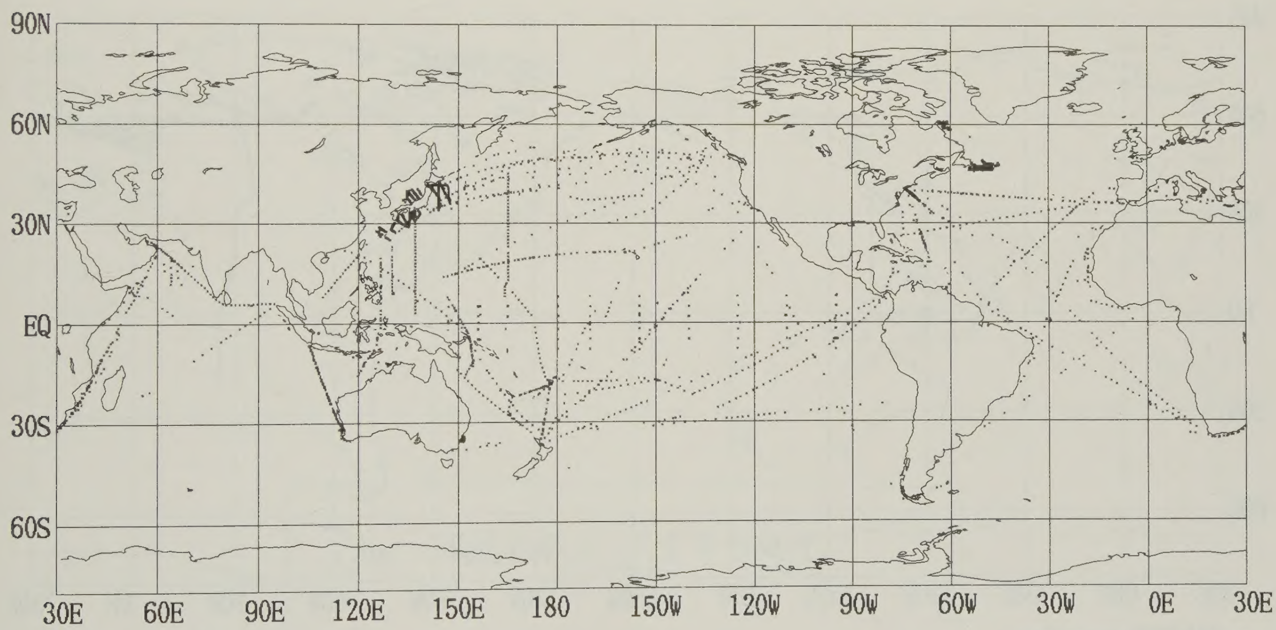
Fig.27 Analysis of the sea surface current in the western North Pacific for the 3rd ten-day period in OCT 1996. Small arrows indicate sea surface currents measured with acoustic Doppler current profilers, GEKs deployed in research vessels, and ship drift by merchant ships/drifting buoys during the month. Major currents such as the Kuroshio and the North Equatorial Current are denoted by larger open arrows.

Geographical Distribution of Oceanographic Data



SHIP messages

Total data:137817

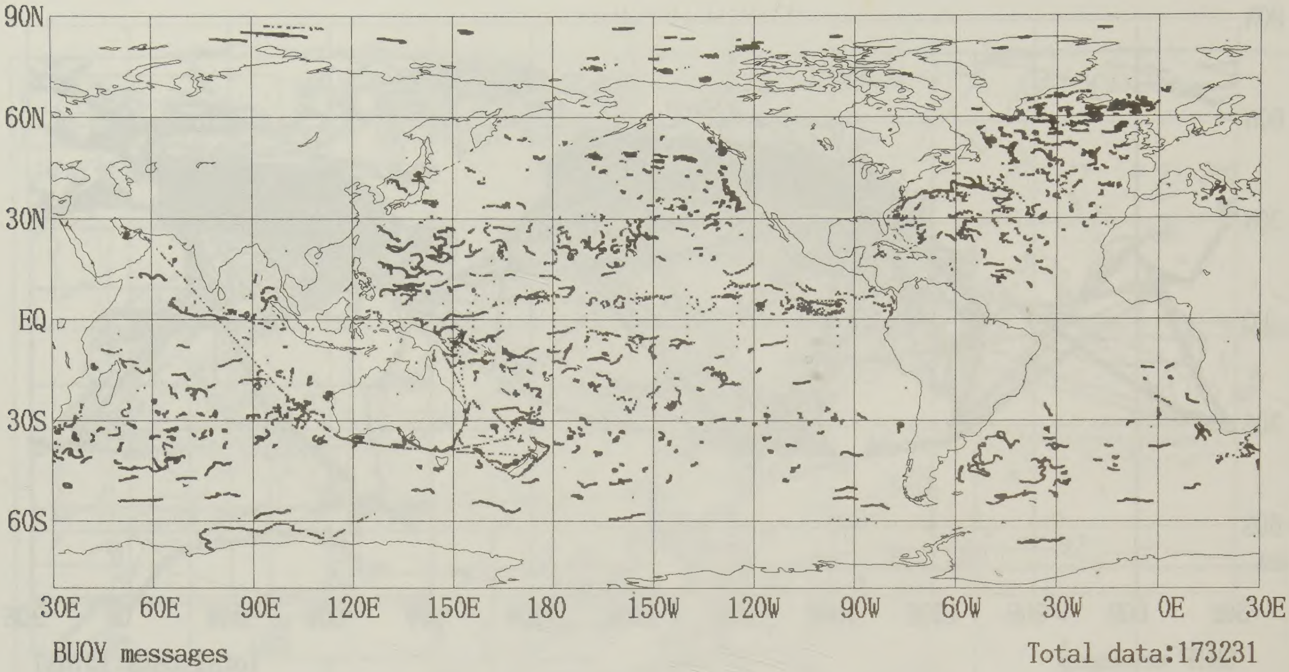


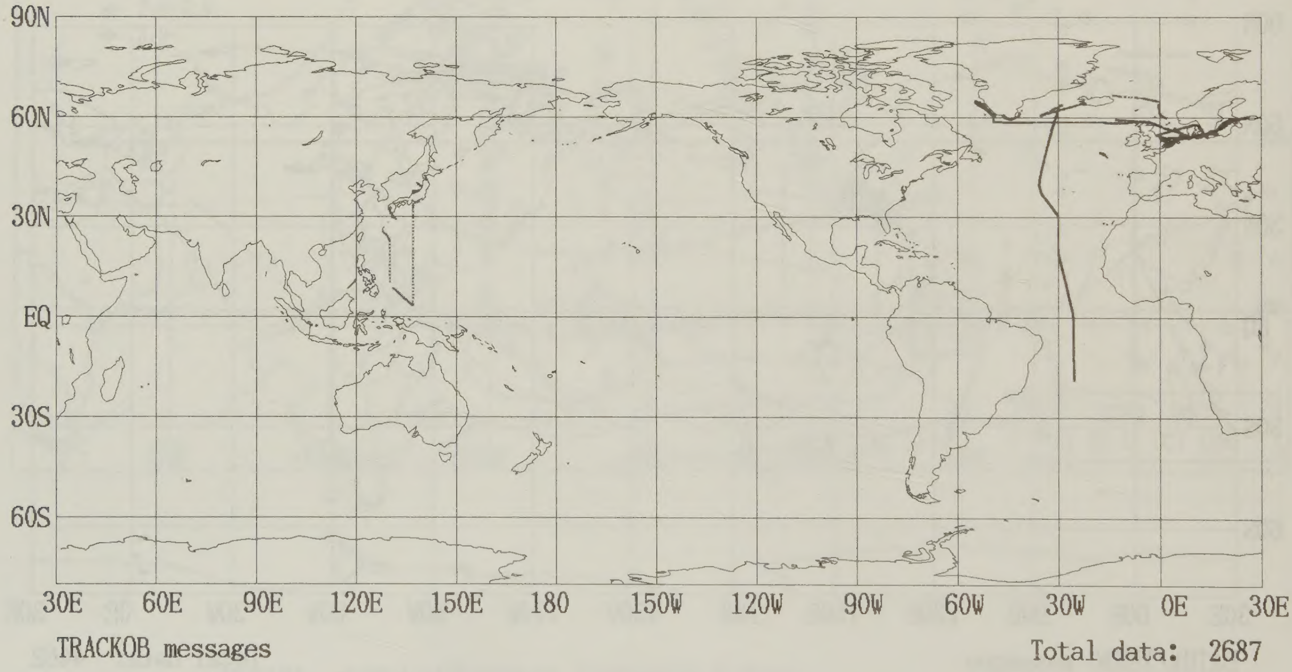
BATHY/TESAC messages

Total data: 4462

第28-1図　測点分布図(1996年10月)

Fig.28-1 Geographical distribution of SHIP messages (SST data, top) and BATHY/TESAC messages (subsurface temperature data, bottom) for OCT 1996.





第28-2図　測点分布図(1996年10月)

Fig.28-2 Geographical distribution of BUOY messages (buoy drift and SST data, top) and TRACKOB messages (ship drift and SST data, bottom) for OCT 1996.

気 象 庁 海 洋 月 報

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